SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010 USEPA Conditions of Approval			
July 2, 2010	**A. Background and Information**	Not Applicable	No response necessary
July 2, 2010	**B. Pechiney Risk Based Application** The conditional approval is based on USEPA's review of the Application. AMEC Geomatrix's Amendments 1 through 3 to the Application, and USEPA Headquarters review of the Application.	Not Applicable	No response necessary
July 2, 2010	**Conditions of Approval** **C1. Certification.** Within 15 days after the date of this conditional approval and before beginning implementation of the amended Application, please submit a revised certification that reflects and maintains the integrity of the Certification language in 40 CFR761.3 and 761.(a)(3)(i)(E).	Not Applicable	A revised certification was submitted to USEPA on July 15, 2010.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010	**C2. Update site-specific sampling and analysis plan.** Within 15 days after the date of this approval, Pechiney shall submit for USEPA approval an updated sampling and analysis plan for soils, concert, and asphalt. The plan shall consolidate the sampling proposed in the Application and in Amendments 1, 2, and 3 and shall include the rational for the number and types of samples to be collected for both additional PCB site-characterization and PCB-cleanup verification. The sampling plan shall utilize the "EPA Region 1 Standard Operating Procedure for Sampling Porous Surfaces for PCBs (EPA SOP) to collect concrete samples. USEPA Analytical Method 1668-B shall be consulted to verify the sample collection method in the EPA SOP is appropriate to collect samples for dioxin-like congeners. **C.3. Onsite disposal of onsite PCB-contaminated concrete and soils.** Pechiney shall complete the additional soil and concrete characterization sampling proposed in the Amended Application with 45-days after the date of this conditional approval. **(See below for the remainder of the C.3. conditions).** **C.5. Amendment 2 to the Application**. Additional proposed concrete and soil sampling for PCB Aroclor and PCB congener analysis. Pechiney shall conduct the additional soil and concrete characterization sampling and laboratory analysis proposed in the Amended 2 ("Proposed Concrete and Soil Sampling Plan or Coplanar Polychlorinated Biphenyls Former Pechiney Cast Plate Facility", April 2, 2010) as modified by the conditions of approval established…..[*in the July 2, 2010 letter]*. **(See below for the remainder of the C.5. conditions).** **C.6. Amendment 3 to the Application.** Additional proposed concrete sampling for PCB Aroclor analysis. Pechiney shall conduct the additional concrete sampling and laboratory analysis proposed in the Amended 3 ("Proposed Additional Concrete Sampling Plan for Polychlorinated Biphenyls Former Pechiney Cast Plate Facility", April 2, 2010) as modified by the conditions of approval established…[*in the July 2, 2010 letter*]. **(See below for the remainder of the C.6. conditions).**	Additional concrete and soil PCB characterization/verification samples were collected during the implementation of the below grade and soil removal work. The result of these samples are presented in the completion reports as follows: <u>Phase I</u> Concrete - Section 3, Table 2, and Figures 4 and 5 Soil - Section 4, Table 3, and Figures 6 thru 9 <u>Phase II</u> Concrete - Section 3, Table 2, and Figures 4 and 5 Soil - Section 4, Table 6, and Figures 6 thru 9 <u>Phase III/IV/VI</u> <u>Phase I</u> Concrete - Section 3, Table 2, and Figures 4 and 5 Soil - Section 4, Table 3, and Figures 6 thru 9 <u>Phase V</u> Concrete - Section 3, Table 2, and Figures 4 and 5 Soil - Section 4, Table 3, and Figures 4 and 5	As summarized in our response to USEPA's conditions on December 29, 2010: To meet the Sampling and Analysis Plan (SAP) condition outlined in the July 2, 2010 conditional approval letter, an extension request was submitted to USEPA for the submittal of the SAP on July 16, 2010. The SAP was submitted to U.S. EPA on July 27, 2010. USEPA was notified on August 13, 2010, that the compliance dates outlined in the Conditional Approval letter would be delayed and that the sampling proposed in the SAP would be deferred pending USEPA's approval of the SAP. USEPA approved the SAP with modifications on August 30, 2010. These modifications included 1) the requirement to use USEPA Method 3540C (Soxhlet Extraction) for samples extracted for the analysis of PCBs by EPA Method 8082 (latest version); 2) that concrete samples must be properly crushed prior to extraction; 3) methods for maintaining low detection limits; and 4) requesting the field quality assurance/quality control (QA/QC) procedures for the collection of concrete and soil samples. A summary of the field QA/QC procedures were submitted to U.S. EPA on September 3, 2010. The sampling covered under Section 2.1 (Amendment 3), Section 2.2 (Amendment 2), and Section 2.3 (Application) of the SAP was conducted between September 9, 2010 and October 18, 2010, with final laboratory analytical data received on November 8, 2010. On December 27, 2010, a summary of the soil and concrete Aroclor results were provided in Tables 1 and 2 of Attachment 1; the soil and concrete dioxin-like PCB congener results were provided in Tables 3 and 4 of Attachment 1. Figures depicting the sampling locations were also provided in Attachment 1 as Figures 1, 2a, and 2b. As noted below in our response to Condition C.3.a. below, the data associated with Attachment 1-*Impact of Additional Soil and Concrete Characterization on Risk-Based Remediation Goals* from the above sampling event was submitted to USEPA on December 29, 2010. On February 2, 2011, a revised version Tables 3 and 4 of Attachment 1 (Condition C.3.a), was submitted. These tables were updated to include data qualifiers generated from the data review. Beginning on August 26, 2013, the below grade demolition and soil removal work began at the site. As part of this work, the SAP was implemented for the collection and analysis of additional concrete and soil verification samples. As concrete slab removal progressed, isolated areas of stained concrete (black or pink to magenta in color) and/or stained layered concrete were encountered and evaluated for the potential presence of PCBs by collecting and analyzing concrete core samples. Additional concrete slab samples were collected using a similar grid spacing of approximately 40 feet established for the random sampling approach outlined in *Section 2.1 Concrete Characterization Samples (*PCBs) of the SAP. The sample spacing was reduced or adjusted as needed based on the condition of the concrete or the observed staining (black to magenta). In cases were stained layered concrete slabs were encountered; each layer was sampled and tested for PCBs. Below grade concrete structures were sampled using a similar approach, using a sample spacing that ranged between 10 to 40 feet depending on the geometry of the structure (interior and exterior walls and floors of the structure) were tested. Concrete sample identifications were marked on the concrete adjacent to the sample location with spray paint. The concrete samples were collected by pulverizing the concrete in place using rotating drill bit. The sample dimensions were approximately 1.5 -inches in diameter by 3-inches in length, to be consistent with the previous concrete characterization samples and *40 CFR Part 761; Subpart O; Section 761.286*.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
	Continued…		Following removal of PCB-impacted concrete or PCB-impacted structures, soil samples were collected below the removed concrete and/or structure. Soil samples were collected as described in *Sections 2.3 Soil Characterization Sampling Beneath Concrete Slabs* and *Section 2.3 [2.4] Soil Verification Sampling (PCBs)* of the SAP. Soil sample locations were marked with flags noting the location and sample number. PCB cleanup levels were applied for the depth horizons of 0 to 5 feet (3.5 mg/kg total PCBs); 5 to 15 feet (23 mg/kg total PCBs); 0 – 15 feet (2.0 mg/kg Aroclor 1254); and greater than 15 feet relative to native grade (established for the adjacent parking lot along the east side of the site). If PCBs were detected above the cleanup level in the soil samples, additional excavation was conducted and a new round of verification samples were collected at the new depth horizon. If PCBs were detected below 3.5 mg/kg in the initial soil samples collected from the 0 – 5 foot horizon, to the extent practical, deeper samples were collected within the same depth horizon or deeper to confirm PCB concentrations were below specific cleanup level for the depth horizon. Soil samples were collected with either with the excavator bucket, hand auger, or by hand using a glass jar.
July 2, 2010 **July 1, 2011**	**C.3.a. Cumulative health risk evaluation to include dioxin-like PCB congeners.** Within 30 days after completion of the additional site characterization (including PCB RAP and Amendments 1, 2, and 3 to the Application) for PCBs (Aroclors and PCB congeners) required under this approval, Pechiney shall demonstrate the cumulative health risk from the site addressing all contaminants of concern does not increase above 1 x 10^{-5}. Due to the age of the releases at the site, dioxin-like PCB congeners (i.e., PCB congeners) may be present in onsite concrete and soils and are, therefore, added to the contaminants of concern. If PCB congeners are detected in onsite concrete and / or soils, Pechiney must demonstrate the PCB congener levels do not increase the overall cumulative risk for the site above 1 x 10^{-5}. If this risk level is exceeded, Pechiney must propose for USEPA approval cleanup levels for PCBs in concrete and soils that do not pose a risk of injury to health or the environment.	Not Applicable	As noted in our response to USEPA's conditions on December 29, 2010: Additional soil and concrete characterization for dioxin-like PCB congeners was completed in September and October, 2010. This work was conducted following the procedures described in Section 2.2 of the SAP (Amendment 2 to the PCB Notification Plan). On December 29, 2010, a summary of the soil and concrete dioxin-like PCB congener results were provided in Tables 3 and 4 of Attachment 1. To determine whether or not the dioxin-like PCB congeners at the Site may contribute more significantly to overall cumulative risk for the Pechiney site than PCBs as Aroclor mixtures, regression analyses and human health risk calculations were performed with the pairs of dioxin-like PCB congener and Aroclor mixture data from the 2010 concrete and soil samples. The methodologies and results of these evaluations were presented in Attachment 1. As presented, potential human health risks from dioxin-like PCB congeners (as dioxin TEQ) are slightly more significant than potential human health risks from total Aroclors, and a slight reduction of the site-specific, risk-based remediation goals for PCBs as total Aroclors would be necessary to be adequately protective of PCBs as dioxin-like congeners. Specifically, the following revised remediation goals for PCBs (as total Aroclors) are proposed: 1) 3.5 mg/kg for total Aroclors in concrete or soil that may be left exposed at the surface; and 2) 23 mg/kg for total Aroclors in soil to be left below pavement or other ground cover that only construction workers may come into contact with during construction (or 5 feet below crushed concrete containing less than 3.5 mg/kg). On February 2, 2011, a revised version Tables 3 and 4 of Attachment 1-Impact of Additional Soil and Concrete Characterization on Risk-Based Remediation Goals (Condition C.3.a), was submitted to USEPA. These tables were updated to include data qualifiers for the data review. On May 23, 2011, the SGS Laboratory Reports for the dioxin-like PCB congener results and LDC Data Validation Reports for the 2010 dioxin-like PCB congener analysis were submitted to USEPA as requested. Based on these results and USEPA's review of the results, the revised PCB remediation goals were approved by USEPA on July 1, 2011 with conditions. In addition, USEPA approved Attachment 1 ("*Impact of Additional Soil and Concrete Characterization on Risk-Based Remediation Goals*") which contained a description and process used to make correlations between site-specific concentrations of PCB Aroclors and dioxin-like PCB congeners.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010	**C.3.b. Grading plan for the Pechiney site before remediation.** Within 45 days after the date when Pechiney completes the additional site characterization required in this approval, Pechiney shall submit for USEPA review and concurrence, the grading plan for the site. In general, the site-specific grading plan shall: 1. Identify the location, depth, and PCB concentration (Aroclors and PCB congeners) of all onsite soils proposed for onsite disposal relative to the location and depth of soils that may get disturbed during grading of the site and relative to onsite soils containing total PCB concentrations below the approved PCB cleanup level. 2. Be informed by the results of additional soil and concrete characterization required at the site and described in the Amended Application. See Condition 3a above. 3. Identify the locations for onsite disposal of crushed concrete with PCB concentrations below the approved cleanup level relative to the location of soils contaminated with PCBs above the cleanup level and soils contaminated with solvents (e.g., volatile organic compounds, total petroleum hydrocarbons, Stoddard solvent). 4. Demonstrate that during grading operations PCB contaminated soils located below 5 feet bgs (or at a depth modified by USEPA) and containing PCBs equal to or above the approved cleanup level will not be disturbed and mixed with onsite soils and crushed concrete containing less than the approved cleanup level and less than 1 ppm PCBs. 5. Include the measures that Pechiney will take to prevent spread of PCBs at and above the approved cleanup level throughout or at specific locations at the site if the soil mixing mentioned in Item 4 above occurs. **6.** Identify the location of any proposed underground physical barriers that Pechiney may install before grading the site and that are intended to alert others that onsite soils containing high PCB concentrations (e.g., 2,000 ppm) have been disposed onsite.	Backfill and Site Grading Phase I – Section 7 Phase II – Section 7 Phase III/IV/VI – Section 7 Phase V – Section 7 Underground Warning Barriers (UWBs) *Phase II* Sections 4 and 7, and Appendix F (Concrete Cover within Area C; FDC #4; North Concrete Cover in Shoring Box; Concrete Cover in Area 4A/4B; South Concrete Cover in Shoring Box)	As noted in our response to USEPA Conditions on December 29, 2010, the grading plan could not be finalized until the remediation goals for concrete and soil were approved by USEPA. Remediation goals for soil and concrete were needed to determine the cut and fill quantities of these materials that will remain on site; which will need to be incorporated into the proposed final grading plan. In our response, we noted that a preliminary grading plan based on the site-specific cleanup levels for PCBs in soil or crushed concrete would be provided under separate cover for informational purposes. A preliminary site-specific grading plan was submitted to USEPA on February 2, 2011 as part of our response to Condition C.3.b. On May 23, 2011 a revised version of the Grading Plan (Figure G-9) was submitted to USEPA, to include the areas were soils with PCBs > 1 mg/kg would be located on site after the completion of final grading . With USEPA's conditional approval of the remediation goals on July 1, 2011, a revised grading plan was submitted to USEPA on July 15, 2011 to address the conditions outlined in A.2.b of USEPA's July 1, 2011 Conditional Approval letter. The grading plan also included the PCB data that was available for the deeper structures left in place by Alcoa in the northeastern portion of the site (see response/information for the Juky 2, 2010 Condition C.9. On October 25, 2013, an updated version of the grading plan was submitted to USEPA. As noted in the Amec Completion Reports, additional areas of PCB impacted soil were encountered above the cleanup levels and required removal. As a result the final site grade was lowered several feet to account for this change. Excavations were backfilled using either (1) crushed concrete or (2) import soil. Grading by moving deeper soil (greater than 5 feet) to shallower depths (0 to 5 feet) was not allowed. Backfill material was placed into the excavations from the surface elevations downward. Shallow soil (0 to 5 feet) was recontoured as needed using grade stakes as guides to cut/fill grade contours as needed; however cut material was only taken from shallow depths from non-impacted areas. An as-constructed drawing is attached (Appendix A of this summary); however this drawing is being revised to reflect some minor grade adjustments made to storm water detention Pond 2. The revised as-constructed drawing will be provided under separate cover. The location of the underground physical barriers, later referred to "Underground Warning Barriers" [UWB] is provided in the Completion Reports. A site-wide Record Drawing is attached (Appendix B of this summary) which depicts the location of the UWB's. This drawing will be updated to include the maximum concentration of total PCBs that remain in place below the UWB.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010	**C.3.c. Soils management plan after remediation.** Within 30 days after Pechiney completes remediation of the site, Pechiney shall submit for review and USEPA approval a post-remediation soil management: plan. The plan must describe all the actions that will be taken to ensure proper management and disposal of PCB-contaminated soils, PCB-contaminated concrete, PCB-contaminated asphalt if such materials are encountered during grading, construction, and installation of underground utilities; and after redevelopment, if such materials are encountered during maintenance or repair of underground structures (e.g., utilities) at the site above the PCB cleanup levels approved by USEPA. Such soils, concrete, and / or asphalt must be removed from the site if encountered at the surface and / or at depths that USEPA determines may result in an unreasonable risk of injury to health or the environment.	Not Applicable	A draft Soil Management Plan (SMP) was submitted to USEPA on February 26, 2015, and is currently under review by USEPA and DTSC.
July 2, 2010	**C.3.d. Revised Appendix C before remediation.** Within 45 days after Pechiney completes the additional site characterization required in this approval, Pechiney must submit a revised Appendix C (Site-Specific Modeling for the Protection of Groundwater). **1)** Rainfall totals that were used were based on an average rainfall year of 14.8 inches (1914-2007) of which a 25% infiltration rate of approximately 4 inches was used. Since the model was run over a period of 500 years and in order to simulate a more conservative worst case, a suggested 250-500 year recurrence interval for rainfall would be more realistic. In addition, short duration, high intensity rainfall events shall be considered. Can the model simulate 24-hour rainfall events such as 100, 250, 500 year 24-hour recurrence intervals that would produce wetting fronts capable of transporting PCBs?	Not Applicable	As included in our December 29, 2010 response, our responses to USEPA's questions 1 though 4 were as follows. **Response to the first question (1):** It would be inappropriate to base the infiltration rate on rainfall with long recurrence intervals such as 250 or 500 years, because it would be unrealistic for rainfall with such recurrence intervals to persist over a period of 500 years. The objective of the site-specific modeling is to evaluate the long-term impacts to groundwater by PCBs in soil and concrete disposed on-site, which requires the use of an infiltration rate that corresponds to long-term average rainfall, instead of extreme events. In addition, annual rainfall with 250 to 500 year recurrent intervals cannot be estimated, because only 100 years of rainfall data (from 1906 to 2009) are available at the nearby weather station (Los Angeles Civic Center).[1] Although annual rainfall with a 100-year recurrence interval can be estimated as 34 inches per year, even this estimate contains a fair amount of uncertainty because only 100 years of data are available. Sufficient conservativeness has been built into the infiltration rate of 4 inches per year used in the site-specific modeling. First, because the final ground surface will be either paved or vegetated and graded to facilitate runoff, the assumed 25 percent of rainfall as infiltration is a conservative assumption. Second, the assumed infiltration rate of 4 inches per year is higher than estimates from other published studies (see Section 2.0 of the attached Appendix C of the December 29, 2010 response).

[1] Western Regional Climate Center, http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5115

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
	C.3.d. Revised Appendix C before remediation. Continued;	Not Applicable	December 29, 2010 **Response to the first question (1) continued:** Short duration, high intensity rainfall events, such as 24-hour rainfall with a 100-year recurrence interval, are not expected to substantially impact the downward transport of PCBs through the unsaturated zone. First, during short duration, high intensity rainfall events, infiltration rates would not increase in proportion to rainfall. Most of the rainfall would become runoff because of quick soil saturation near the ground surface. In fact, peak runoff during short duration, high intensity rainfall events often drives storm water drainage design. Therefore, infiltration rates during short duration, high intensity rainfall events would not be substantially higher than average infiltration rates. Second, the highest 24-hour rainfall at the nearby weather station between 1906 and 2009 is 5.5 inches, which only translates into a few inches of wetting front movement. Finally, the low mobility of PCBs is mainly a result of their propensity of absorbing to organic matters in the subsurface, as exemplified by their high sorption partition coefficients. For example, a study on a PCB-spill site in Canada concluded that downward flow velocity of dissolved PCBs is likely on the order of millimeters per year (Schwartz et al., 1982).[2] Having higher than average infiltration rates over a handful of days during a 500-year period is not expected to substantially increase the velocity of dissolved PCBs. Therefore, it is unnecessary to simulate extreme rainfall events in the site-specific modeling. Nevertheless, to add another level of conservativeness in the site-specific modeling, we revised the infiltration rates so that they consist of five 100-year cycles. Each 100-year cycle is comprised of 99 years with an infiltration rate based on average rainfall (i.e., 4 inches per year) and one year with an infiltration rate based on the rainfall with a 100-year recurrence interval (i.e., 8.5 inches per year). These modifications did not change the results or conclusions of the site-specific modeling.

[2] Schwartz, F.W., J.A. Cherry, and J.R. Roberts, 1982, A case study of a chemical spill: polychlorinated biphenyls (PCBs), 2, Hydrogeological conditions and contaminant migration, Water Resource Research, 18, 535-545.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010	**C.3.d. Revised Appendix C before remediation.** Continued; 2) In addition, solvents are indicated as being present in the soils around the facility. Have solvents been considered in the mobility and transport of PCBs in soils under both saturated and unsaturated conditions? Can the models factor in the effects of solvents on the mobility of PCBs? .	Not Applicable	December 29, 2010 **Response to the second question (2):** The site-specific modeling does not include effects of solvents, such as chlorinated hydrocarbons, Stoddard solvent, and total petroleum hydrocarbons, on the mobility of PCBs under saturated or unsaturated conditions because of the lack of quantitative relationships between sorption partition coefficients (or solubility) of PCBs and co-solvent concentrations even in state-of-the-art modeling programs such as MODFLOW-SURFACT. Research has shown that sorption of hydrophobic organic chemicals (HOCs) such as PCBs can decrease in the presence of some solvents, but that the co-solvent effects are measurable (observable) only under two conditions, neither of which occurs at the Site: a. When the solvents are completely miscible with water; or b. When polar, partially miscible organic solvents are present in concentrations on the order of a few percents by volume (free product). Furthermore, the co-solvents that are neither polar nor completely miscible in water, such as trichloroethene, toluene, and p-xylene, have little effect on the sorption of HOCs (Haasbeek, 1994; Rao et al., 1990; Pinal et al., 1990).[3,4,5] Because most of the solvent-related chemicals in soil at the Site belong to the group of nonpolar, partially miscible organic solvents and exist at relatively low concentrations (i.e., far less than a few percents by volume), these chemicals are not expected to have a substantial impact on the migration of PCBs from crushed concrete. Therefore, the effects from residual solvents in soil are not considered in the site-specific modeling.
July 2, 2010	**C.3.d. Revised Appendix C before remediation.** Continued; 3) The revised Appendix C shall be responsive to the questions. The revised Appendix C shall evaluate the potential for PCBs to migrate from crushed concrete when such material is disposed in onsite areas where soils are contaminated with solvents (e.g., chlorinated hydrocarbons, Stoddard solvent, total petroleum hydrocarbons). Appendix C shall explain the fate and transport mechanism involved in the migration of PCBs at depths well below 15 feet bgs. PCBs have been detected at 71 feet bgs (e.g., 0.490 mg/kg).	Not Applicable	December 29, 2010 **Response to the third question (3):** The location where PCBs were detected at a depth of 71.5 feet at a concentration of 0.490 mg/kg was observed at one boring advanced near a former vertical pit that contained a hydraulic ram. The hydraulic ram extended to a depth of 65 feet and steel sheet piling for the vertical pit extended to a depth of 47 feet. In this case, the PCBs detected at depth below 15 feet bgs are believed to be associated with the historical operation of the former hydraulic ram within the pit (proposed soil removal Area 4a [/4b] in former Building 104). The vertical pit was decommissioned in place in the 1970's by Alcoa. As part of the below grade demolition work, the upper 10 feet of the structure will be removed and the remaining portion of the structure will be capped with concrete. Therefore, this preferential pathway for PCBs to migrate below 15 feet bgs no longer exists. In addition, PCB-impacted soil is proposed for removal to a depth of 15 feet in Area 4a/4b (area where PCBs were detected at 71.5 feet as noted above). Once soil is removed, a concrete layer will be placed at the base of the soil excavation prior to backfill. ***NOTE: The vertical pit described above as being decommissioned in place in the 1970's by Alcoa is referred to as "FDC#4" in the Amec Phase II Area Completion Report. This structure is located under a UWB in the 4a/4b soil removal area.***

[3] Haasbeek, J.F., 1994, Effects of Cosolvency in the Fate and Transport of PCBs in Soil, Remediation, Summer.
[4] Rao, P.S.C., L.S. Lee, and R. Pinal, 1990, Cosolvency and Sorption of Hydrophobic Organic Chemicals, Environmental Science & Technology, 24, 647-654
[5] Pinal, R., P.S.C. Rao, L.S. Lee, and P.V. Cline, 1990, Cosolvency of Partially Miscible Organic Solvents on the Solubility of Hydrophobic Organic Chemicals, 24, 639-647.

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010	**C.3.d. Revised Appendix C before remediation.** Continued; 4) In addition, the revised Appendix C shall indicate the particle size used in the model for the crushed PCB-contaminated concrete proposed for onsite disposal	Not Applicable	December 29, 2010 **Response to the fourth question (4):** Particle size is not a parameter in the model. In the original model simulations, the hydrogeologic and Van Genuchten's parameter values for sand from the ROSETTA program were used to approximate the properties of crushed concrete. The ROSETTA program uses USDA soil textual classes or percentages of sand, silt, and clay, rather than particle sizes, as input parameters. Based on the project engineering specifications, the crushed concrete will be well graded with a particle size of 1 ½-inch or ¾-inch. Therefore, the model for crushed concrete was revised to use the hydrogeologic and Van Genuchten's parameter values for gravel (Fayer et al., 1992)[6]. It should be noted that the downward water flux and PCB migration are limited by the least permeable soil types in the unsaturated zone. Therefore, using either gravel or sand properties will not result in a substantial change to simulation results. Using the gravel instead of sand properties to represent crushed concrete did not change the results and conclusions of the site-specific modeling. In summary, the changes made to the model to address EPA's comments did not change the results or conclusions of the site-specific modeling. Therefore, PCBs in soil at the site and PCBs in concrete that may be re-used (on-site disposal) as on-site fill materials do not pose a potential threat to groundwater at the site. The December 29, 2010 submittal included a revised version of Appendix C.

[6] Fayer, M. J., M. L. Rockhold, and M. D. Campbell, 1992, Hydrologic Modeling of Protective Barriers: Comparison of Field Data and Simulation Results, Soil Science Society of America Journal, 56: 690-700.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010	**C.3.e. Interim cap.** Within 60 to 90 days after the date of this approval or within 15 days after completing cleanup verification sampling, whichever occurs first, Pechiney shall provide a figure to scale depicting the interim cap to be installed at the Pechiney site atop crushed onsite concrete containing PCBs below the approved cleanup level for surface and shallow soils. The figure shall identify the type and thickness of material that will function as an interim cap. The PCB concentration in the cap material shall be below 1 ppm PCBs. The interim cap shall not allow infiltration of water. Although the site is fenced, it is not certain when the site will be redeveloped and the specific industrial / commercial uses for the site have not been finalized. **<u>Pechiney's Proposed Cap</u>** Pechiney has proposed to add a color dye to the waste concrete with PCBs below 5.3 ppm to be disposed onsite within 0 to 5 feet bgs and to place atop that waste crushed onsite-concrete containing PCBs below 1 ppm. If USEPA approves the PCB cleanup levels that Pechiney proposed for concrete and soils, USEPA may consider the proposed cap if (1) a material (e.g., a layer of asphalt) that could prevent water infiltration is placed atop the crushed concrete containing PCBs below 1 ppm, (2) information is provided to USEPA demonstrating no adverse impacts to the environment are expected from the dyes Pechiney proposes to use, and (3) the interim cap is placed after site grading is completed. In addition, Pechiney needs to provide the figure to scale depicting the interim cap requested in this Condition of approval.	Not applicable *<u>All Completion Reports</u>* Section 2 and Table 1 (cleanup levels) Sections 4 and 7 (backfill and surface cover)	As noted in our December 29, 2010 response to USEPA's conditions, a proposed interim cap figure was submitted by e-mail correspondence to USEPA on October 1, 2010; in which the proposed approach for the interim cap was as follows: • Placement of an interim cap consisting of a minimum 25-centimeter thick layer of crushed onsite concrete containing PCBs at concentrations less than 1 ppm (<1 ppm) over only those localized areas that have been backfilled with crushed onsite concrete containing PCBs at concentration greater than 1 ppm (>1 ppm) but less than the proposed site-specific remediation goal or where soil remains at the native soil surface with PCBs >1 ppm but less than the proposed site-specific remediation goal. • This interim cap would consist of a reduced infiltration layer comprised of compacted crushed concrete containing PCBs at a concentration <1 ppm. The cap would be constructed with sloped upper surfaces to promote drainage to a best management practice (BMP) controlled storm water collection area as opposed to allowing ponding and infiltration to occur. • Crushed concrete containing PCBs at concentrations <1 ppm are also proposed for use during site grading as unrestricted fill materials without the placement of an interim cap of any type over these materials. A revised conceptual figure depicting the proposed interim cap and the thickness of the materials that would underlie the proposed interim cap was attached. We have also considered other options for the colorant dye marker. Rather than using a dye to demarcate the uppermost surface of the area where on-site crushed concrete containing PCBs at concentration >1 ppm and less than the proposed site-specific remediation goal is placed, we are proposing to use an HDPE brightly colored mesh identifier layer. Details of the HDPE material were shown on Figure 9 of the response summary. Subsequent to the response, a revised figure depicting the proposed cap was submitted to USEPA on December 29, 2010, in which the surface cover would consist of crushed concrete containing PCB at concentrations less than or equal to 1 mg/kg. As described in the Amec 2014 Completion Reports, concrete containing PCBs at concentrations greater than 1 mg/kg and less or equal 3.5 mg/kg was shipped off site for disposal at the request of the City of Vernon, which eliminated the need for the placement of the interim cap over this material. This change in condition is documented in USEPA's February 4, 2014 letter, for the Concrete Cleanup Level C-1, where the concrete cleanup level was adjusted to be equal to or less than 1 mg/kg to be implemented for the reuse of onsite crushed concrete. Onsite crushed concrete containing PCBs at concentrations less than or equal to 1 mg/kg (and import gravel from a local quarry) was used as backfill and as a 3- to 6-inch cover material over the site soils to complete the final site grade.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010	**C.4. Amendment 1 to the Application.** Refer to Condition 5 below. In addition, within 15 days after the date of this approval, submit a response to the attached comments (USEPA HQs comments). If Pechiney has responded to any of the attached comments, please include the reference for that response. Amendment 1 to the Application contains responses to some of these comments that USEPA Region 9 included as questions in various emails messages containing specific questions about the Pechiney site.	Not applicable	A 10-day extension request was submitted to USEPA on July 16, 2010 setting a revised submittal date of July 27, 2010. The response to USEPA HQ comments was transmitted to USEPA by electronic mail with SAP on July 27, 2010. A response to USEPA email questions was submitted to USEPA on March 16, 2010.
July 2, 2010	**C.5. Amendment 2 to the Application**. Additional proposed concrete and soil sampling for PCB Aroclor and PCB congener analysis. Pechiney shall conduct the additional soil and concrete characterization sampling and laboratory analysis proposed in the Amended 2 ("Proposed Concrete and Soil Sampling Plan or Coplanar Polychlorinated Biphenyls Former Pechiney Cast Plate Facility", April 2, 2010) as modified by the conditions of approval established.....[*in the July 2, 2010 letter]*.	Not Applicable	C.5. Please see response to Condition C.2 (C.5) above for the SAP.
July 2, 2010	**C.5.a. PCB Congener analysis**. Laboratory analysis if PCB congeners (i.e., dioxin-like coplanar PCBs) shall be conducted using USEPA Method 1668B or the most current revision to the method.		C.5.a. **PCB Congener analysis**. USEPA Method 1668B was used for the congener analyses.
July 2, 2010	**C.5.b. Concrete Sampling**. The attached "Standard Operating Procedure for Sampling …….		C.5.b. **Concrete Sampling**. The SAP included the concrete sampling approach.
July 2, 2010	**C.5.c. Additional Characterization**. …….		C.5.c. **Additional Characterization**. The additional characterization outlined in Amendment 2 was conducted and justification for the adjusting the proposed PCB cleanup levels were submitted to USEPA. See response to condition C.3.a.above
July 2, 2010	**C.5.d. Proposed Statistical correlation between dioxin-like PCB congener TEQs and individual Aroclor mixture concentrations**. USEPA is not approving the use of these correlations because it believes that such correlations may not be accurate due to weathering of the original Aroclor mixtures.		C.5.d. **Proposed Statistical correlation between dioxin-like PCB congener TEQs and individual Aroclor mixture concentrations**. However, in the July 2, 2010 letter, USEPA did not approve the use of statistical correlations. Subsequent to the 2010 condition approval, the statistical approach was accepted by USEPA in its July 1, 2011 Conditional Approval letter.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010	**C.6. Amendment 3 to the Application.** Additional proposed concrete sampling for PCB Aroclor analysis. Pechiney shall conduct the additional concrete sampling and laboratory analysis proposed in the Amended 3 ("Proposed Additional Concrete Sampling Plan for Polychlorinated Biphenyls Former Pechiney Cast Plate Facility", April 2, 2010) as modified by Approval Conditions C.5.b and C.5.c, above.	Not Applicable	Please see response to Condition C.2 (C.6) above for the SAP.
July 2, 2010	**C.7. Section 6 of the Application, "PCB Remedial Action Plan' (PCB RAP**). USEPA is approving the PCB RAP as modified by the conditions established in this approval.	Not Applicable	No response necessary
July 2, 2010	**C.7.a**. Determining **PCB concentrations for offsite disposa**l (bulk PCB remediation waste)……	*All Completion Reports* Section 6	The "as found" (on-situ) PCB concentrations for concrete and soil were used to profile the waste for offsite disposal as a bulk PCB remediation waste. Soil and concrete with PCB concentrations greater than 50 mg/kg were transported offsite to US Ecology in Beatty Nevada for disposal. Soil with PCB concentrations above 1 mg/kg and less that 50 mg/kg were transported offsite to Chiquita Canyon Landfill for disposal. Copies of the waste manifests were submitted to USEPA, along with a final waste tonnage summary for all the Phase areas on February 10, 2015.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010	**C.7.b. Disposal of PCB Remediation Waste** **Non-porous surface contaminated with PCBs (40CFR 761.61(a)(5)(i)(B)(2)(ii) and 761.61(a)(5)(i)(B)(2)(iii) depending on their PCB concentration.** **Porous surface contaminated with PCBs (40CFR 761.61(a)(5)(i).** **Cleanup wastes (40CFR 761.61(a)(5)(v) Non liquid)**	*Phase I* Section 3 – Concrete and Table 2 Section 4 – Soil and Table 3 Section 5 – Piping and other materials Appendix E - Wipe sample results Section 6 – Waste Management and Table 7 *Phase II* Section 3 – Concrete and Table 2 Section 4 – Soil and Table 3 Section 5 – Piping and other materials Appendix E - Wipe sample results Section 6 – Waste Management and Table 7 *Phase III/IV/VI* Section 3 – Concrete and Table 2 Section 4 – Soil and Table 3 Section 5 – Piping and other materials Appendix E - Wipe sample results Section 6 – Waste Management and Table 7 *Phase V* Section 3 – Concrete and Table 2 Section 4 – Soil and Table 3 Section 5 – Piping and other materials Appendix E - Wipe sample results Section 6 – Waste Management and Table 7	***Non-porous surface contaminated with PCBs*** During below grade work, underground steel piping was encountered in areas with known PCB soil or concrete impacts, and as such the piping was managed for offsite disposal based on the associated soil or concrete results. In other areas of the site, where below grade piping was encountered, wipe samples of the steel piping were collected and analyzed for PCBs. Pipe sections with wipe samples exhibiting PCBs at concentrations greater than 1 microgram per 100 centimeters squared (µg/100 cm^2) were removed and transported offsite for disposal. Impacted metals piping was transported to either Chiquita Canyon Landfill or US Ecology. ***Porous Surfaces contaminated with PCBs*** Concrete slab area identified in the RAP with total PCBs at concentrations greater than 1 mg/kg, 50 mg/kg, and 1000 mg/kg were demarcated with paint and saw cut or broken to facilitate removal and offsite disposal. The concrete data associated with these slabs were used to profile the concrete for offsite disposal as a bulk PCB remediation waste. During implementation of the work, additional areas of PCB impacted concrete (slab and structures) were defined through sampling and the concrete sample results were used to profile the concrete for offsite disposal. In some cases, the condition of the concrete (magenta staining) was an indicator that the PCB concentrations were above 50 mg/kg, and as such the concrete was managed for disposal at a concentration greater than 50 mg/kg. A similar approach was taken for soil, and in-situ soil sample results were used to profile the soil for offsite disposal. Soil and concrete with PCB concentrations greater than 50 mg/kg were transported offsite to US Ecology for disposal. Soil with PCB concentrations above the 1 mg/kg and less that 50 mg/kg were transported offsite to Chiquita Canyon Landfill for disposal. ***Cleanup Wastes (non-liquid)*** PCB contaminated PPE and rags were transported to US Ecology for disposal. ***Other Waste*** PCB contaminated decontamination fluids were transported to US Ecology. Concrete cutting water was profiled for disposal based on the analytical results of the drum contents. Concrete cutting waste and solids were transported to US Ecology.
July 2, 2010 **February 4, 2014**	**C.7.c. Number and location of soil cleanup verification samples: Modified by the February 4, 2014 USEPA Letter Modification A.1.**	Not Applicable	Sample location maps and sample tables were submitted to USEPA by phase area as follows: • Phase I – May 9, 2014 • Phase II – September 11, 2014 • Phase III/IV/VI – August 25, 2014 • Phase V – August 25, 2014

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010	**C.7.d. Decontamination of sampling equipment and tools used during cleanup and/or decontamination activities and disposal of decontamination waste and residue.**	Not discussed in the completion reports. Bucket Wipe Sample Results *Phase I* Appendix E	When non-dedicated sampling tools such as the concrete drill bit, hand auger equipment or stainless steel scoops were used to collect samples for PCB analysis, these tools were washed in an Alconox solution, double rinsed with potable water (double wash/rinse), rinsed with laboratory-grade hexane using a spay bottle, and air dried. When heavy equipment such as excavators completed work in a PCB-impacted area, the excavator was sent to the decontamination station and the bucket was washed in the same way described above. A wipe sample was collected from the decontaminated bucket to demonstrate the effectiveness of the cleaning procedures, and based on the wipe sample results (non-detect for PCBs) the cleaning procedures were effective, and implemented for the duration of the project. As a alternative, several pieces of heavy equipment had multiple bucket attachments such that a PCB-impacted bucket was removed from the machine and left in the PCB exclusion zone and a "clean" bucket was attached to the machine when it was taken to work in a non-PCB area. Waste associated with the decontamination activities were contained in 55-gallon drums and transported offsite for disposal to US Ecology. See response to the July 2, 2010 Condition C.7.b above.
July 2, 2010	**C.7.e. Soil management during below-grade demolition.** An AMEC geologist must be present at the site while below grade demolition is being performed at the site. In-situ soil samples shall be collected during below demolition activities and submitted for analysis to determine the concentration at which PCBs may be present	Not Applicable	An Amec geologist was onsite during the below grade demolition, soil removal work, and PCB soil sampling activities. In situ soil samples were collected during the below grade work for analysis. Sampling was conducted at the direction of the Amec geologist.
July 2, 2010	**C.7.f Dust controls, etc.** Submit a revised Perimeter Air Monitoring Plan; identify measures to be taken to mitigate dust; inclusion of season-specific wind-rose; figure depicting wind flow patterns in the site vicinity; and monitoring equipment location shall be adjusted for the wind-rose.	*All Completion Reports* Section 2 - The completion reports note that air monitoring was conducted and that the results would be provided in a separate report.	A Revised Perimeter Air Monitoring Plan (PAMP) was submitted to USEPA on October 28, 2011. This Plan was implemented during the below grade demolition and soil removal work. A report summarizing the perimeter air monitoring data is in progress and will be submitted to USEPA (and DTSC) in April 2015. During the below grade work, upwind and downwind stations were monitored for PCBs and PM10 (and other COCs; such as arsenic, lead and VOCs) using time-integrated samples that were submitted to the laboratory for analysis on a weekly basis. In addition, real-time measurements for dust (and VOCs) were collected throughout the work day at the monitoring stations. A discussed in the PAMP, the real-time action level for PM10 was identified as the most stringent when compared to the real-time dust action levels for PCBs, lead and arsenic. As such, the real-time action level for PM10 (50 µg/m^3 above background dust levels) was used as the primary action level to direct changes to dust controls.
July 2, 2010	**C.7.g. Backfill and grading. …..This approval does not cover the approval of the cleanup levels and onsite disposal of onsite PCB-contaminated soil and concrete proposed in the application**	*All Completion Reports* Table 1	Based on subsequent submittal to USEPA, the revised PCB cleanup levels were approved with conditions by USEPA on July 1, 2011. The approved cleanup levels were applied during the impletion of the below grade and soil removal work.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 2, 2010	**C.7.h. Figure 9, PCB Soil Remediation Areas, Former Pechiney Cast Plate Inc., Facility dated 07/01/2009.**	Not applicable	The available PCB concentrations associated with structures 1A (3.6 mg/kg of total PCBs), 1B (unknown), and 1C (2.0 mg/kg of total PCBs) were posted on the grading plan submitted to USEPA on July 15, 2011. These structures were left in place by Alcoa and covered with 8 inches of concrete. These three structures remain in place at an elevation of approximately 169 feet mean sea level, which is approximately 14 to 16 feet below the parking lot pavement in the northeastern portion of the site. The fourth structure ("Homo Furnace Pit") is a concrete slab and remains in place at elevation of approximately 170.5 feet mean sea level. The location and presence of these structures will be documented in the Land Use Covenant and shall not be disturbed during future site grading and redevelopment. As noted earlier, the Record Drawing for these older structures and the structures cut and capped in placed during the below grade demolition work is shown on the Record Drawing provided in Appendix B of this summary.
July 2, 2010	**C.8. Routes for transportation of waste for disposal.** Within 30 days before PCB-containing waste are transported…….	Not applicable	On November 4, 2010, a Hazardous Materials Transportation Plan (HMTP) was submitted to USEPA, which included the trucking route to the freeway and the anticipated disposal facilities. As required in the HMTP, the approved waste profiles from the disposal facilities for the bulk PCB remediation waste was submitted to USEPA (and DTSC) on September 18, 2013, for US Ecology in Beatty Nevada and Waste Connections, Chiquita Canyon Landfill in Castaic California. As outlined n the HMTP, trucks leaving the site were routed though the City of Vernon streets to the 710 Freeway minimizing impacts to local communities. To minimize truck parking on City streets, hauling trucks were staged onsite along the eastern portion of the property. The number of round trips for the truck hauling waste on any given day varied, with 2 to 3 trips per day for Chiquita and 1 trip per day for Beatty.
July 2, 2010	**C.9. Restrictive Covenant…….**	Not applicable	A preliminary draft of the land use covenant (LUC) was circulated by email to USEPA (and DTSC) on June 16, 2014, and was later revised to incorporate DTSC's new template. A preliminary draft of the revised LUC was submitted to USEPA on February 2, 2015. Based on follow-up discussions with USEPA regarding the PCB elements of the LUC, a revised LUC will be submitted to USPEA (and DTSC).
July 1, 2011 USEPA Conditions of Approval			
July 1, 2011 **February 4, 2014**	**A2. The Cleanup levels described in Section A.**1…. **A.1.a. Cleanup Level C-1**: Concrete (0 to 5 feet below ground surface [bgs] – Total PCB Aroclors…3.5 mg/kg…. **A.1.b. Cleanup Level S-1**: Soil (0 to 15 feet bgs – PCB Aroclor 1254… 2.0 mg/kg… **A.1.c. Cleanup Level S-2**: Soil (0 to 5 feet bgs – Total PCB Aroclors… 3.5 mg/kg… **A.1.d. Cleanup Level S-3**: Soil (5 to 15 feet bgs – Total PCB Aroclors… 23 mg/kg… …are approved with the following conditions:	*All Completion Reports* Table 1	The PCB cleanup levels were implemented during the below grade and soil removal work. Concrete containing PCBs at concentrations greater than 1 mg/kg and less the PCB concrete cleanup level of 3.5 mg/kg was transported off site for disposal at the request of the City of Vernon. This change in conditions is documented in USEPA's February 4, 2014 letter. In the 2014 letter, the Concrete Cleanup Level C-1 was adjusted to be equal to or less than 1 mg/kg to be implemented for the reuse of onsite crushed concrete. Onsite crushed concrete containing PCBs at concentrations less than or equal to 1 mg/kg (and import gravel from a local quarry) was used as a 3- to 6-inch cover material over the site soils to complete the final site grade.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
July 1, 2011	**A2.a. Soil Cleanup Levels S-1, S-2, and S-3.** Post-excavation cleanup verification……..Within 15 days before excavating PCB contaminated soils that are not located below structures such as concrete slabs or asphalt, submit a revised cleanup verification sampling approach that will facilitate the required demonstration …	See response to July 2, 2010 Condition C.2	A verification sampling approach was submitted to USEPA on July 22, 2012. To the extent practical, the verification sampling approach was implemented to confirm cleanup levels were met in for each interval (0 to 5 feet (at 3.5 mg/kg) and 5 to 15 feet (at 23 mg/kg). Please see response/information for the July 2, 2010 Condition C.2. on page 3 above.
July 1, 2011	**A.2.b. Revised Grading Plan:** As to cleanup level S-3. The Site has to be graded to its interim and final configuration…..Within 15 days after the date of this approval, submit for USEPA review a revised grading plan that incorporates the conditions of C.3.b of the July 2, 2010 approval letter	See response to July 2, 2010 Condition C.3.b	Please see response/information provided above for the July 2, 2010 Condition C.3.b. A revised grading plan was submitted to USEPA on July 15, 2011 to address the conditions outlined in C.3.b of USEPA's July 2, 2010 Conditional Approval letter. The grading plan included the PCB data that was available for the deeper structures left in place by Alcoa in the northeastern portion of the site. During the implementation of the below grade and soil removal work, an updated version of the grading plan was submitted to USEPA on October 25, 2013. As noted earlier, an as-constructed drawing of the site grade is attached (Appendix A); however this drawing is being revised to reflect some minor grade adjustments made to storm water detention Pond 2. The revised as-constructed drawing will be provided under separate cover.
July 1, 2011	**A.2.c. Additional Conditions:** Condition C.3.c (Soil Management Plan after remediation) and C.7.e (Soil management during below-grade demolition) are relevant and directly applicable to the approval of the soil cleanup levels.	Not applicable	Please see response/information for the July 2, 2010 Conditions C.3.c and C.7.e.
July 1, 2011	**A.2.d. Concrete Cleanup Level C-1**: Concrete with PCBs above 1 mg/kg and below 3.5 mg/kg will not be used at the Site as surface cover.	*All Completion Reports* Section 2.0 and Table 1	Concrete containing PCBs at concentrations greater than 1 mg/kg and less the PCB cleanup level of 3.5 mg/kg for concrete was shipped off site for disposal at the request of the City of Vernon. This change in conditions is documented in USEPA's February 4, 2014 letter as noted above under response/information to July 1, 2011 Condition A.2.
February 4, 2014 USEPA Response to Amec's Proposed Modifications to USEPA's Approvals			
February 4, 2014	**A. Modification to USEPA's July 2, 2010 Conditional Approval (Approval #1)** **1. AMEC proposed Modification #2: PCB impacts identified during demolition**……	Not Applicable	Please see response/information for the July 2, 201 C.7.c above.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
February 4, 2014	**A.2 AMEC Proposed Modification #3: PCB impacted soils at depths below 15 feet.** For details, please read the attached January 24, 29014 e-mail message from Amec to USEPA……Total PCB and Aroclor 1254 concentration in soil below 15 feet below ground surface (bgs. [i.e., below native grade]) must be confirmed via collection and analysis of in-situ, discrete samples during underground demolition, if such data does not exiting already. Soil below 15 feet bgs are defined here as Deep Soils. Deep Soils verified to contain total PCBs above 23 mg/kg and/or Aroclor 1254 above 2.0 mg/kg shall be remediated to these cleanup levels, <u>if feasible</u>. Best efforts to remediate the Deep Soils (below 15 feet bgs) may not result in achievement of these cleanup levels. An "Alternative"……as describe below.…	Not Applicable	Please see below under "Alternative".
February 4, 2014	<u>*Alternative:*</u> Deep soils (below 15 feet bgs) exceeding 23 mg/kg total PCBs and/or 2.0 mg/kg Aroclor 1254 (where Aroclor 1254 is the only detected Aroclor) before or after soil excavation and removal, may remain in place if: (a) Up to date grading plan …….. (b) Physical UWB…….if the UWB is encountered during grading, construction, post-constructions, and/or post-redevelopment, such activities must be halt and the soil management plan must be immediately activated and implemented. (c) Soil management plan is immediately implemented to prevent (1) mixing of Deep Soils with shallower soils containing PCB concentration equal to or below (a) 3.5 mg/kg….. (d) Deep soil left in place are not collocated with soil containing solvents or petroleum hydrocarbons that may increase the mobility of the PCBs due to co-solvency	Not Applicable	(a) As noted earlier under Conditions C.3.b (July 2, 2010), an as-constructed drawing of the site grade is attached (Appendix A); however this drawing is being revised to reflect some minor grade adjustments made to Pond 2. The revised as-constructed drawing will be provided under separate cover. A pre-construction grading plan is not currently available, and will be provided to USEPA in the future by the prospective developer. However, it is anticipated that site regarding for redevelopment will occur in the upper 10 feet, and will not likely disturbed these areas.
		<u>*Phase II*</u> Sections 4 and 7, and Appendix F (Concrete Cover within Area C; FDC #4; North Concrete Cover in Shoring Box; Concrete Cover in Area 4A/4B; South Concrete Cover in Shoring Box)	(b) An UWB was placed above the concrete layer placed over Deep Soils left in place above the clean up levels. As noted above under Conditions C.3.b (July 2, 2010), the location of the UWB's is provided in the Completion Reports for Concrete Cover within Area C; Concrete Cover in Area 4A/4B (including the North Concrete Cover in Shoring Box and South Concrete Cover in Shoring Box). A site-wide Record Drawing is attached (Appendix B of this summary) which depicts the location of the UWB's. This drawing will be updated to include the maximum concentration of total PCBs that remain in place below the UWB.
		Not Applicable	(c) As noted earlier under Conditions C.3.c (July 2, 2010), a draft Soil Management Plan (SMP) was submitted to USEPA on February 26, 2015, and is currently under review by USEPA and DTSC

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
	(e) A survey is conducted to (1) final excavation floor and UWB; (2) total PCB and Aroclor concentration below the UWB.… (f) Restricted land use covenant…….. *Additional Requirements*….The UWB shall be constructed with concrete or cement slurry pr other suitable materials that allows a completion thickness of 6 inches…..The UWB shall be overlain by a colored (e.g. orange) mesh geotextile layer	*Phase II* Tables 7 and 8	(d) Soil samples were collected for the analysis of volatile organic compounds (VOCs; EPA 8260) and petroleum hydrocarbons (TPH; EPA 8015M) in Area 4a/4b and Area C from soil associated with the UWB. These soil samples included: Area 4a/4b (under the UWB): #1074, #1075, #1076, #1077, #1079, #1081 For these samples, VOCs were not detected. Petroleum hydrocarbons in the diesel range (not detected to 1,210 mg/kg) and heavy oil range (not detected to 2,520 mg/kg) were detected in the soil samples, and are likely associated with the former hydraulic oils that contained PCBs. Inside the Shoring Area for 4a/4b (sample were collected throughout the shoring area): #951, #951-24, #953; #954; #954-22; #955; #956; #958, #960-22; #961; #961-22; and 967-24. For these samples, VOCs were not detected. Petroleum hydrocarbons in the diesel range (not detected to 124 mg/kg) and heavy oil range (not detected to 115.6 mg/kg) were detected in the soil samples, and are likely associated with the former hydraulic oils that contained PCBs. Area C (under the UWB): #854 and #855 For these samples, VOCs were not detected with the exception of the trace detection of benzene at 1.1 µg/kg (#854). Petroleum hydrocarbons in the diesel range (not detected and 329 mg/kg) and heavy oil range (not detected and 4,897 mg/kg) were detected in the soil samples, and are likely associated with the former hydraulic oils that contained PCBs. In addition, the areas with the UWB are not co-located in the areas with known Stoddard solvent-impacted soil (Phase III/IV Area) or volatile organic compound-impacted soil (Phase I Area).
		Phase II Appendix F (Concrete Cover within Area C; FDC #4; North Concrete Cover in Shoring Box; Concrete Cover in Area 4A/4B; South Concrete Cover in Shoring Box)	(e) A summary of the survey data for the areas with the UWB is provided on the site-wide Record Drawing attached (Appendix B of this summary). In additions, this information is included in the Completion reports. The UWB was constructed with a minimum of 6-inches of concrete that was covered with an orange mesh geotextile layer.
		Not Applicable	(f) The LUC will include the information specified in this condition.

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

REFERENCE	CONDITION	COMPLETION REPORT SECTION	RESPONSE/INFORMATION
February 4, 2014	**B. Modifications to USEPA's July 1, 2011 Conditional Approval (Approval #2).** **1. AMEC Proposed Modification #1: Condition A.1.a, Cleanup Level C-1, Approval #2. …….** *USEPA's Modification to Approvals #1 and #2*. USEPA is changing PCB Cleanup Level C-1 in Condition A.1.a in Approval #2 to a concentration equal to or below 1 mg/kg total PCBs. If Aroclor 1252 is the only Aroclor detected in onsite concrete then the cleanup level is the same.	*All Completion Reports* Section 2.0 and Table 1	As noted earlier, concrete containing PCBs at concentrations greater than 1 mg/kg and less the PCB concrete cleanup level of 3.5 mg/kg was transported off site for disposal at the request of the City of Vernon. This change in conditions is documented in USEPA's February 4, 2014 letter. In the 2014 letter, the Concrete Cleanup Level C-1 was adjusted to be equal to or less than 1 mg/kg to be implemented for the reuse of onsite crushed concrete. Onsite crushed concrete containing PCBs at concentrations less than or equal to 1 mg/kg (and clean crushed gravel) was used as a 3- to 6-inch cover material over the site soils to complete the final site grade. The crushed concrete was used to fill low areas, soil excavations and as surface cover at the site. Due to insufficient amount of onsite crushed concrete, import gravel from a local quarry was used for the surface cover in portions of the Phase II, Phase III and Phase VI Areas of the site. Areas of the site that contain crushed concrete will be included in the LUC.
July 21, 2014	**As outlined in Amec's e-mail on Structure to be left in place (FDC#4)** ….As a follow-up to my voice message on Friday, we have a deep structure (vertical pit) within the southern portion of the 4A/4B excavation area that extends to a depth of about 60 feet (concrete and sheet piling). The structure is about 18 feet long by 16 feet wide. The 4A/4B area is located on the west side of the property. This structure was backfill in placed sometime in the late 1970s. The structure has been cut down to an elevation of about 170 feet msl; about 10 feet below native grade in the same manner as the other deeper structures on site. Samples of the backfill material and accessible concrete on the inside of the cut concrete surface of the structure (the exterior is covered with thick metals sheet piling and is not accessible) were collected and the PCB concentrations are listed below. • Backfill material samples - PCBs at 10.6 and 12 mg/kg • Interior concrete samples – PCBs at 4.5 and 4900 mg/kg We plan to cover the structure with a 6-inch thick concrete barrier/mushroom cap (which will be in contact with the structure), similar to other structures, and we will place the orange warning layer over the concrete surface. The structure will be surveyed for the records/and the LUC.	*Phase II* Sections 4 and 7, and Appendix F (FDC #4)	The structure was cut down to a depth of 10 feet below native grade (approximate elevation of 170 feet msl), and the concrete slurry mushroom cover and orange liner were placed over the structure is at an elevation of approximately 171 feet msl. Prior to placing the slurry, a 1-foot trench was cut along the outer walls of the structure for the mushroom cap. The concrete cover was surveyed and a summary of the survey data for this structure is provided on the site-wide Record Drawing attached (Appendix B of this summary). In addition, this information is included in the Completion report for the Phase II area.

References:

SUMMARY OF RESPONSES TO USEPA's CONDITIONAL APPROVALS AND COMPLETION REPORTS INFORMATION
LETTERS DATED JULY 2, 2010, JULY 1, 2011 and FEBRUARY 4, 2011 ON THE POLYCHLORINATED BIPHENYLS NOTIFICATION PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

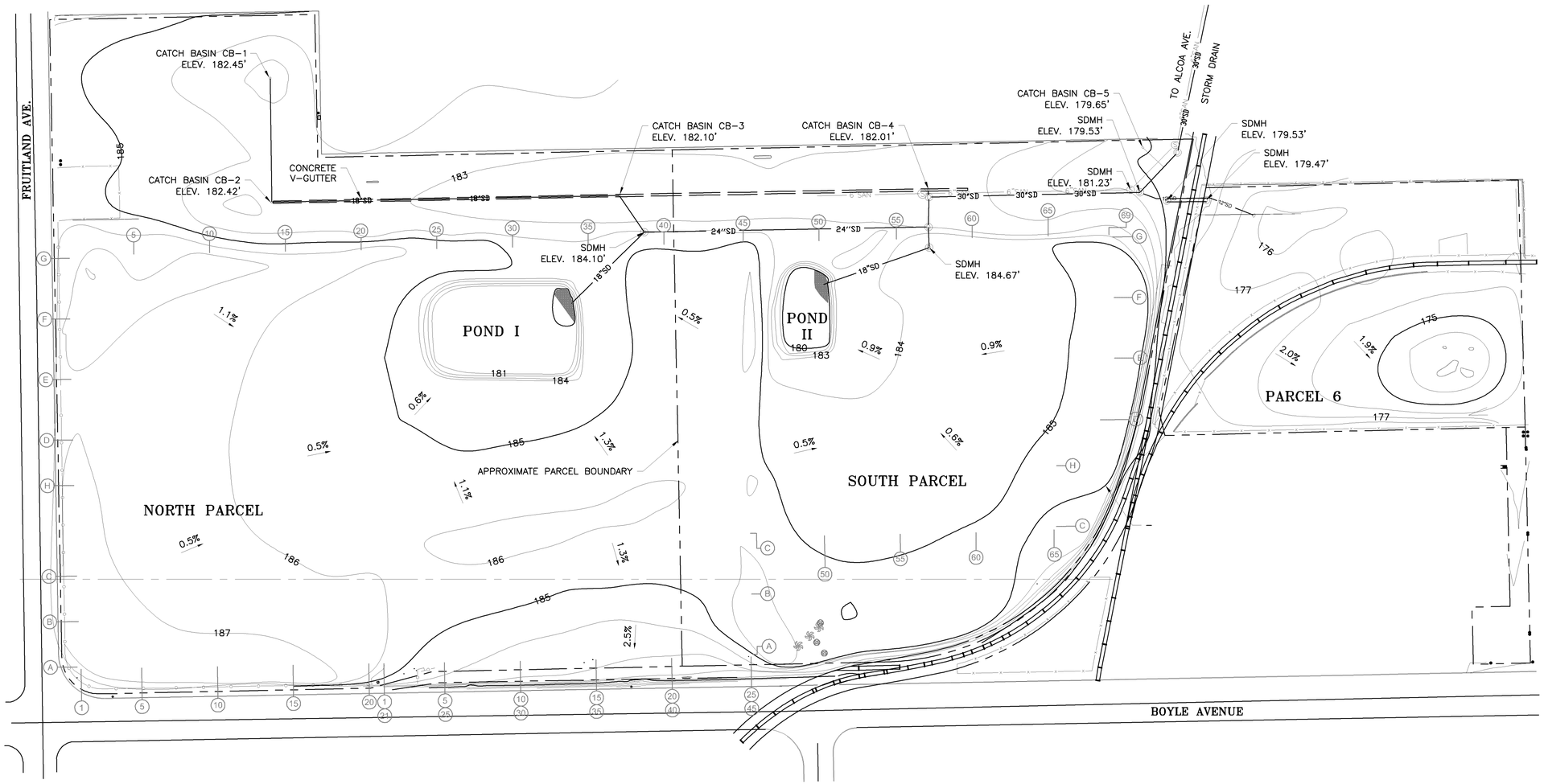
USEPA, July 2, 2010, Conditional Approval Letter, Polychlorinated Biphenyls – U.S. EPA Conditional Approval Under 40 CFR 761.61c, Toxic Substances Control Act – "*Polychlorinated Biphenyls Notification Plan Former Pechiney Cast Plate, Inc Facility, Vernon, California*" July 9, 2009.

USEPA, July 1, 2011, Conditional Approval Letter, Polychlorinated Biphenyls – U.S. EPA Conditional Approval Under 40 CFR 761.61c, Toxic Substances Control Act – "*Polychlorinated Biphenyls Notification Plan Former Pechiney Cast Plate, Inc Facility, Vernon, California*" July 9, 2009.

USEPA, February 4, 2014, Toxic Substances Control Act, Polychlorinated Biphenyls (PCBs) – PCB Cleanup, Former Pechiney Cast Plate Facility, Vernon, California – AMEC's Proposed Modifications to USEPA's Approvals.

APPENDIX A

Site Grading As-Built



EXPLANATION

185 ELEVATION

CAUTION: THIS PLAN MAY BE REDUCED 0 1" 2" ORIGINAL SCALE

DRAINAGE SITE PLAN

REFERENCES:
PLANS

DATUM

NO.	REVISION	DATE	APRVD
1–4	ISSUED FOR PERMITTING 6/6/12, REVISED CITY CMTS 6/18, 7/19, 8/9	8/15/12	
5	REVISED 8/16/12 – ISSUED FOR CONSTRUCTION	8/20/12	
6–12	8/5, CITY CMTS 8/19, 9/10, 12/19/13, 3/14/14, CITY CMTS 4/15, 4/2	4/24/14	
3–14	SWALE MOD, ACC ELIMIN'D 6/09, REGRADE PH II, III, AND IV 7/7/14	7/7/14	
15	REV. PHASE II GRADING	7/24/14	

DRAWN CAS
DESIGNED KAF
CHECKED DLS
REVIEWED CHH

amec
121 Innovation Drive, Suite 200
Irvine, California 92617
(949) 642-0245

BELOW GRADE DEMOLITION & SOIL EXCAVATION
PECHINEY CAST PLATE, INC., FACILITY
3200 FRUITLAND, VERNON, CALIFORNIA

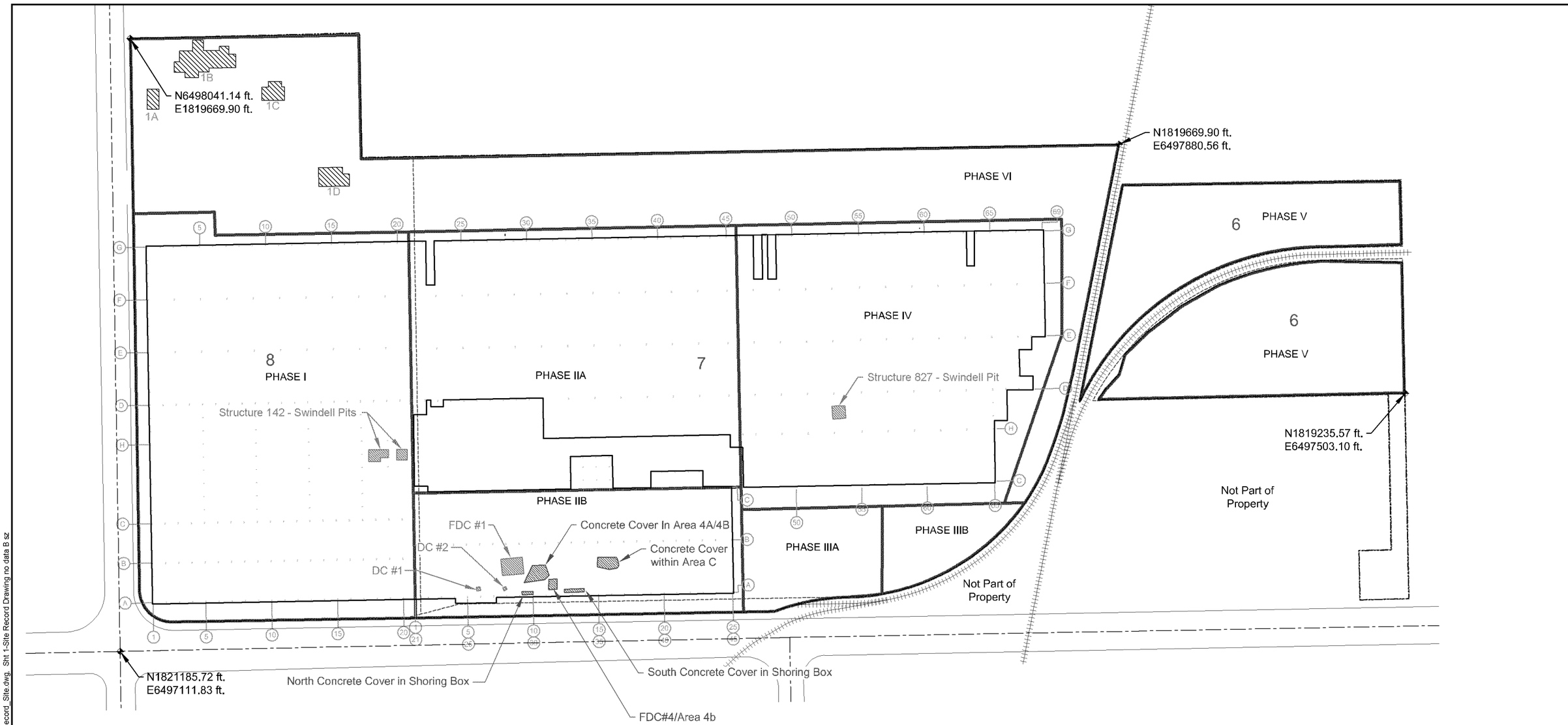
AS-BUILT GRADING PLAN
DECEMBER 2014

DATE: 11/24/14
SCALE: 1" = 80'
SHEET: 1 OF 1 SHEETS
PROJ No: 10627.003
D-1

Plot Date: 03/30/15 - 6:05pm, Plotted by: pat.herring
Drawing Path: Y:\10627.003.0\acad\Reports-2014\Final grade plan files\Pechiney\Pechiney\CAD\As-Built_ Drawing Name: D-1 GRADING PLAN Phase II&III Balance-rev.dwg

APPENDIX B

Site Record Drawing



Explanation

- Concrete cover with orange underground warning barrier (UWB)
- Deeper structure with concrete cover
- Below grade structure with concrete cover with orange UWB
- Previously decommissioned and concrete capped buried structures (1A, 1B, and 1C) and concrete slab (1D) [Ursic, 1999]

- Site boundary
- Phase boundary
- Parcel boundary
- Chain link fence
- Railroad tracks (at grade)
- Former building pad
- (69) (G) Former building column and row numbering system

Benchmark:

Vertical Datum NAVD88

County of Los Angeles BM #Y10598, 2" Disc in walk
4.6' N/O CF, 14.8' W/O BCR at NE COR Slauson Avenue and
Boyle Avenue (to the N) MKD (City of Vernon MON)

2005 Elev= 168.611 Feet NAVD88

Horizontal Datum NAD83, Zone 5

NGS PID Stations AJ1840 and AJ1885 EPOCH DATE 2000.35

Note:

Record drawings for buried structures 1A, 1B, and 1C, and concrete slab 1D are based on prior as built records and were not verified as part of this work.

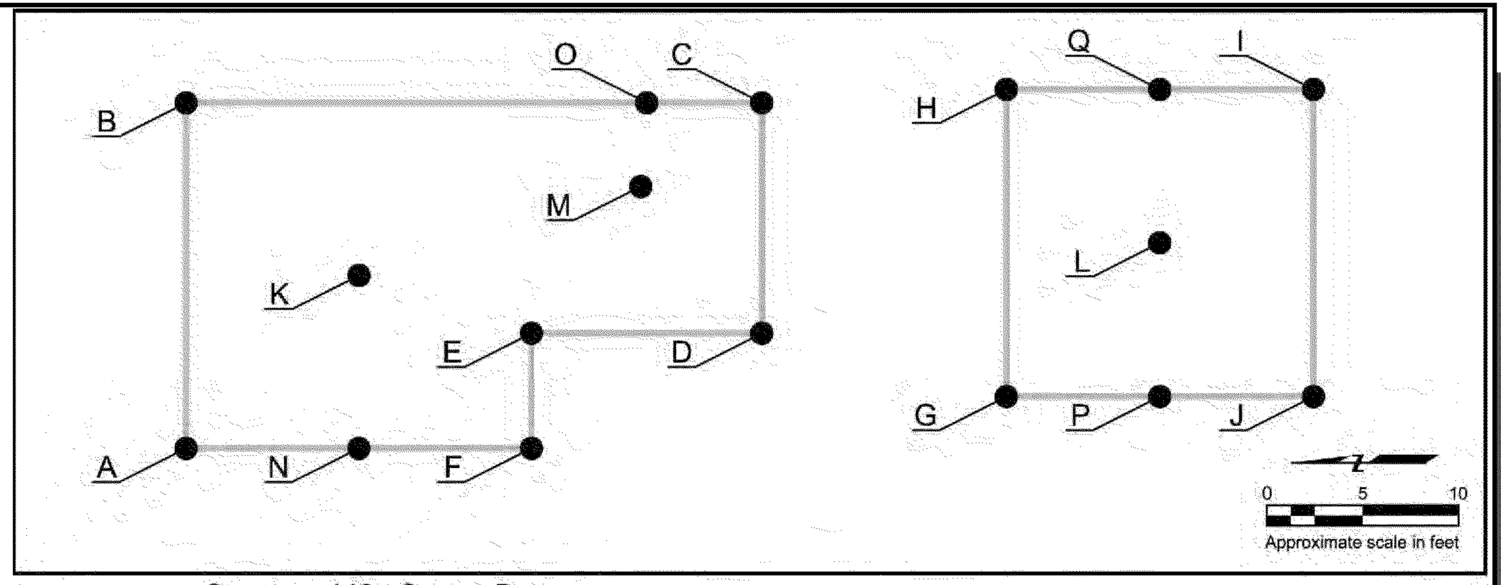
0 75 150
Approximate scale in feet

Basemap modified from Pechiney Cast Plate, Inc. Site Plan dated January 9, 2002; Aluminum Company of America "Works General-MPA" Figure dated October 10, 1984; Los Angeles County Assessor's Office Parcel Map 6310/Sheet 8 dated November 5, 1958; surveys conducted May 31, 2006 and June 6, 2006 by CalVada Surveyors; and surveys conducted October 12, 2011 and September 10, 2013 by Dulin & Boynton.

SITE RECORD PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

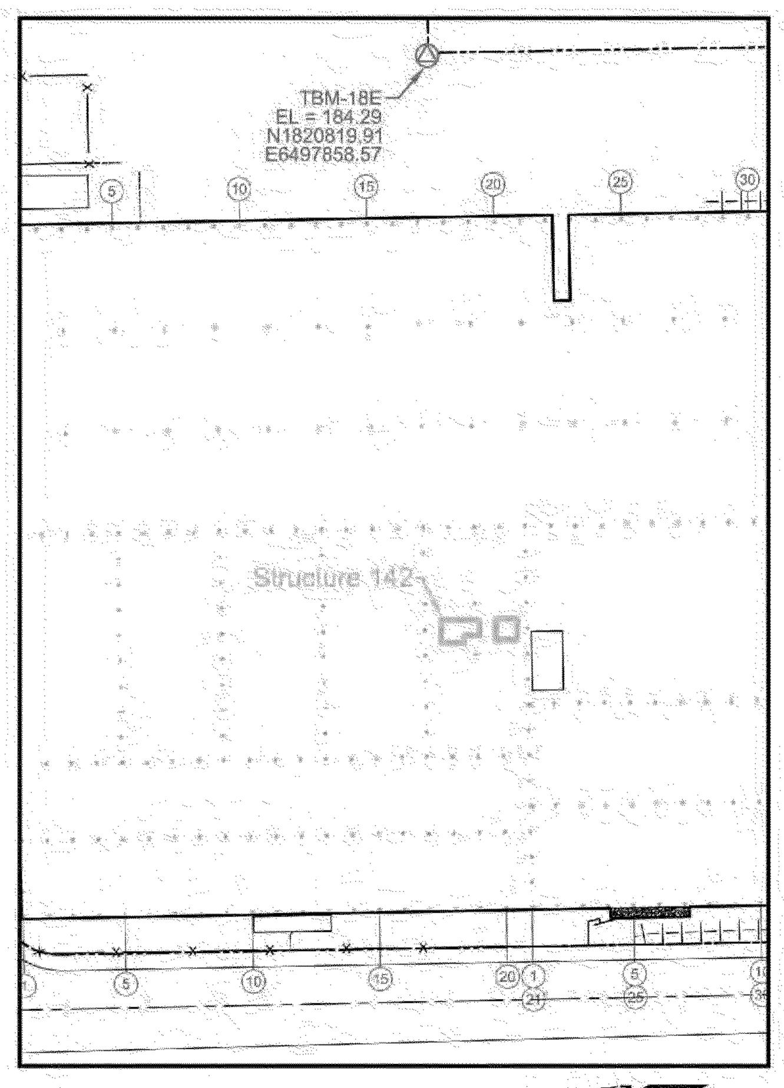
By: pah/jrw	Date: 03/30/15	Project No. 10627.003
amec		Sheet 1 of 4

Plot Date: 3/30/2015 5:59:15 PM, Plotted by: pat.herring
Drawing Path: Y:\10627.003.0\acad\Reports-2015\EPA_Submittal_20150323tb_003-Record_Site.dwg, Sht 1-Site Record Drawing no data B sz



Structure 142 - Survey Data
Pechiney - Phase I Area

Label	Easting	Northing	Elevation
A	6497399.5572	1820808.7018	173.07
B	6497417.5572	1820808.7018	173.09
C	6497417.5572	1820778.7018	173.17
D	6497405.5572	1820778.7018	173.22
E	6497405.5572	1820790.7018	173.09
F	6497399.5572	1820790.7018	173.07
G	6497402.2580	1820765.9630	173.14
H	6497418.2580	1820765.9630	173.19
I	6497418.2580	1820749.9630	173.25
J	6497402.2580	1820749.9630	173.24
K	6497408.5572	1820799.7018	172.40
L	6497410.2580	1820757.9630	172.50
M	6497413.1931	1820785.0162	172.40
N	6497399.5572	1820799.7018	173.24
O	6497417.5572	1820784.7018	173.23
P	6497402.2580	1820757.9630	173.37
Q	6497418.2580	1820757.9630	173.44



BENCHMARK:

VERTICAL DATUM NAVD88

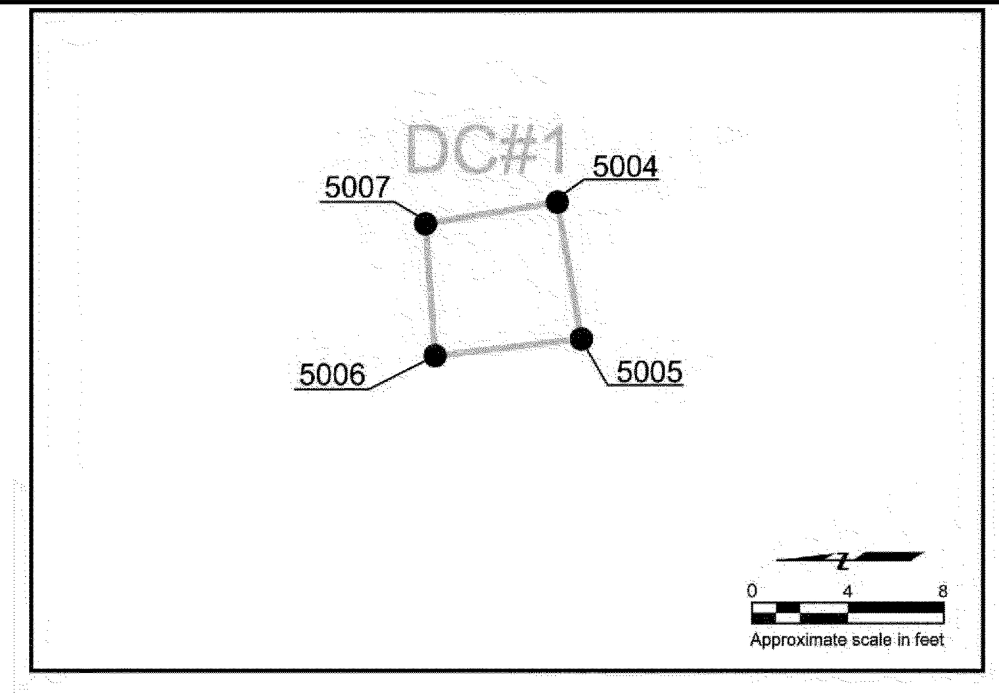
COUNTY OF LOS ANGELES BM #Y10598, 2" DISC IN WALK 4.6' N/O CF, 14.8' W/O BCR AT NE COR SLAUSON AVE AND BOYLE AVE (TO THE N) MKD (CITY OF VERNON MON)

2005 ELEV= 168.611 FEET NAVD88

HORIZONTAL DATUM NAD83, ZONE 5

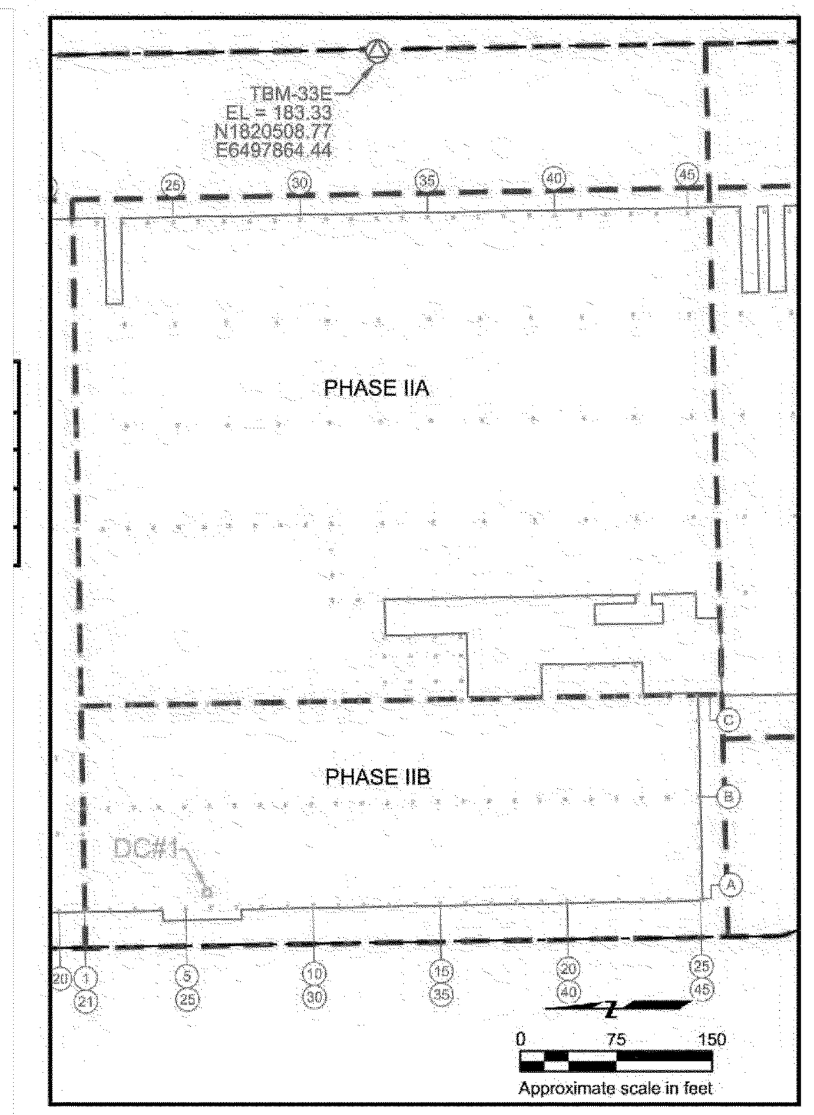
NGS PID STATIONS AJ1840 AND AJ1885 EPOCH DATE 2000.35

LICENSED LAND SURVEYOR
DOUGLAS A. BOYNTON
EXP. 30 SEP 16
L.S. 4787
STATE OF CALIFORNIA



DC#1 - Survey Data
Pechiney - Phase IIB Area

Label	Easting	Northing	Elevation
5004	6497209.8702	1820639.4505	168.56
5005	6497204.1931	1820638.5110	168.56
5006	6497203.4849	1820644.5953	168.54
5007	6497208.9509	1820645.0372	168.54



BENCHMARK:

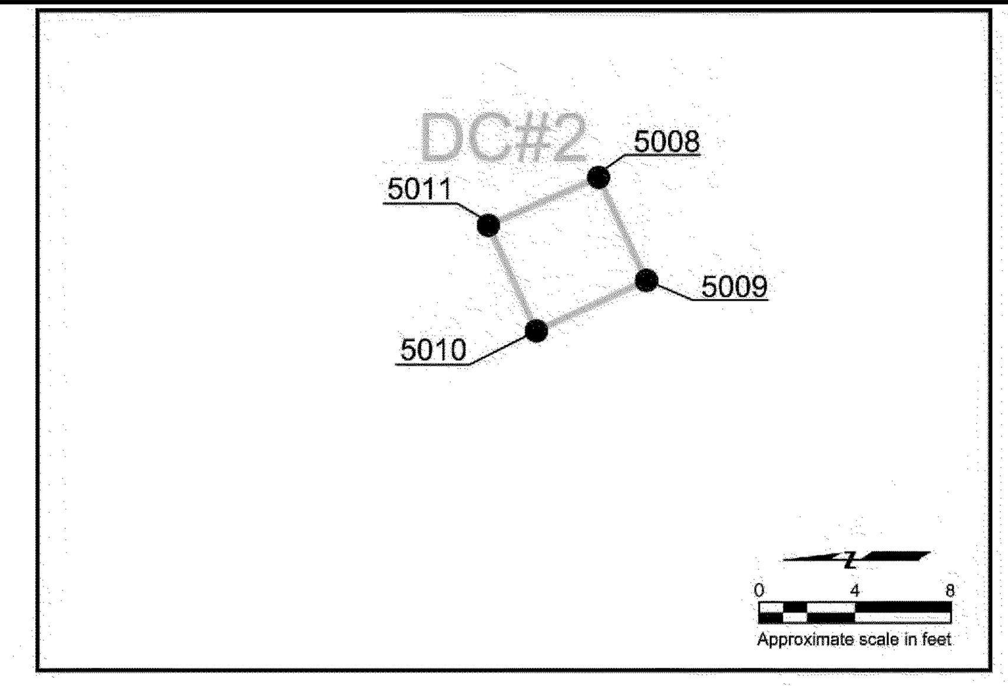
VERTICAL DATUM NAVD88

COUNTY OF LOS ANGELES BM #Y10598, 2" DISC IN WALK 4.6' N/O CF, 14.8' W/O BCR AT NE COR SLAUSON AVE AND BOYLE AVE (TO THE N) MKD (CITY OF VERNON MON)

2005 ELEV= 168.611 FEET NAVD88

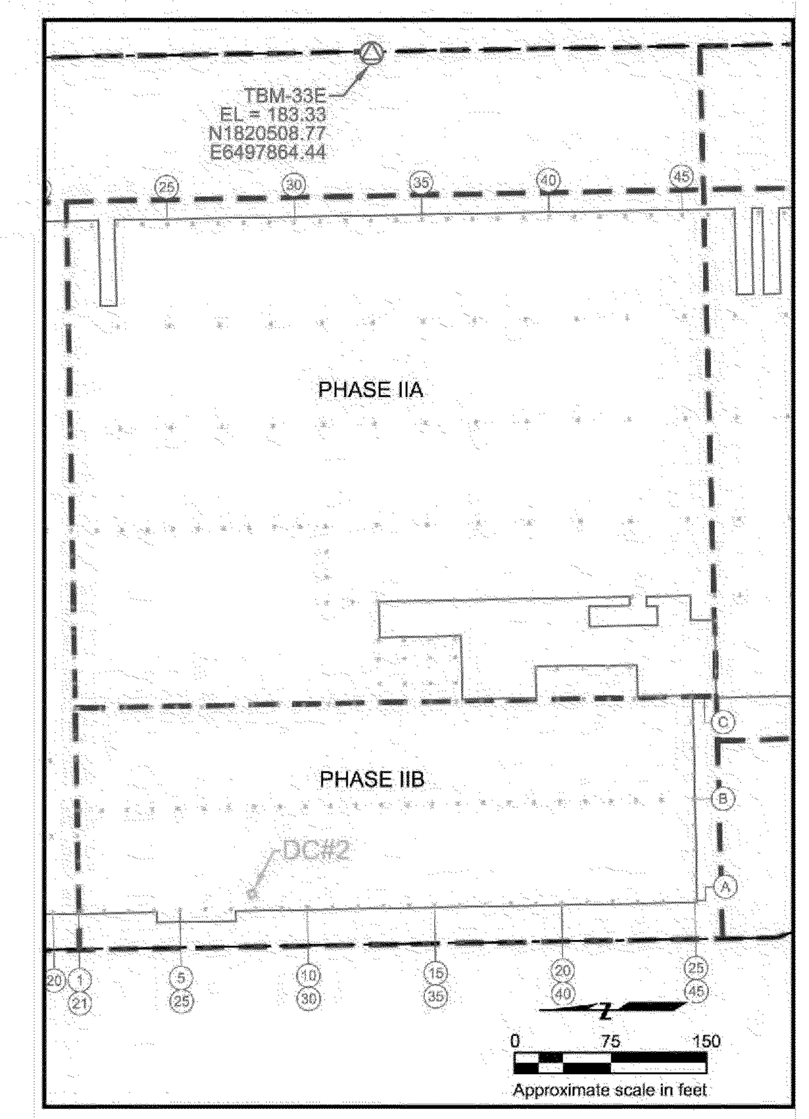
HORIZONTAL DATUM NAD83, ZONE 5

NGS PID STATIONS AJ1840 AND AJ1885 EPOCH DATE 2000.35



DC#2 - Survey Data
Pechiney - Phase IIB Area

Label	Easting	Northing	Elevation
5008	6497210.1503	1820600.7224	166.63
5009	6497205.9032	1820598.7239	166.67
5010	6497203.8340	1820603.2666	166.53
5011	6497208.1824	1820605.2878	166.58



BENCHMARK:

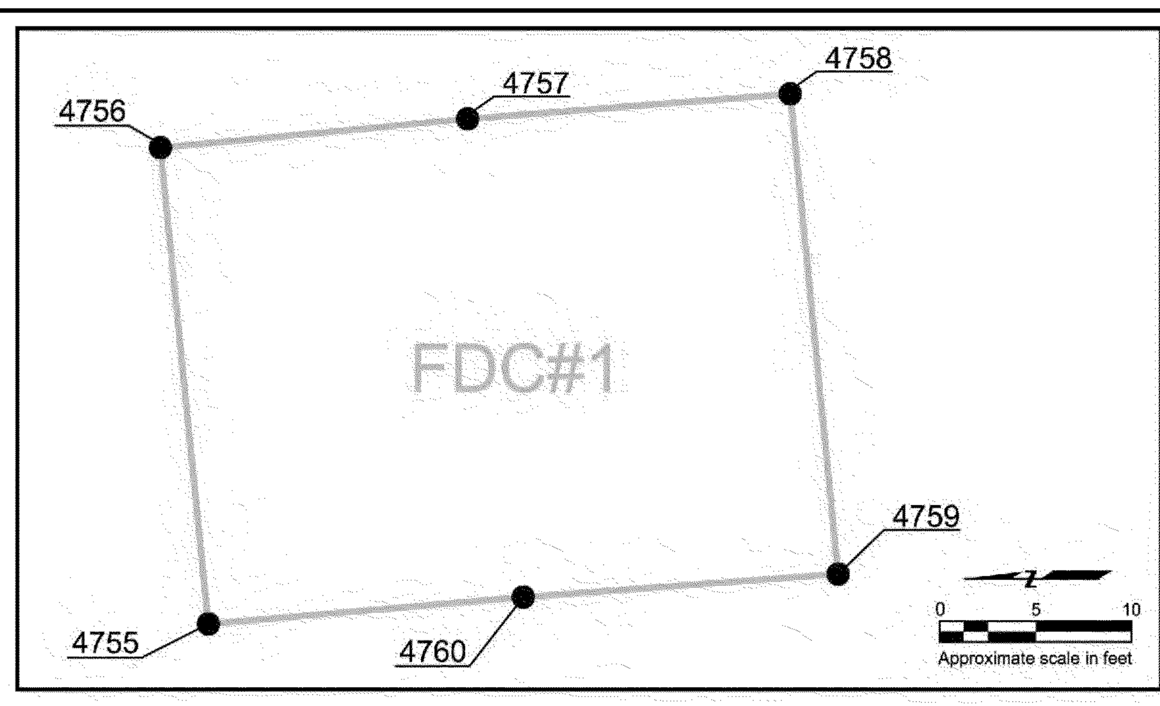
VERTICAL DATUM NAVD88

COUNTY OF LOS ANGELES BM #Y10598, 2" DISC IN WALK 4.6' N/O CF, 14.8' W/O BCR AT NE COR SLAUSON AVE AND BOYLE AVE (TO THE N) MKD (CITY OF VERNON MON)

2005 ELEV= 168.611 FEET NAVD88

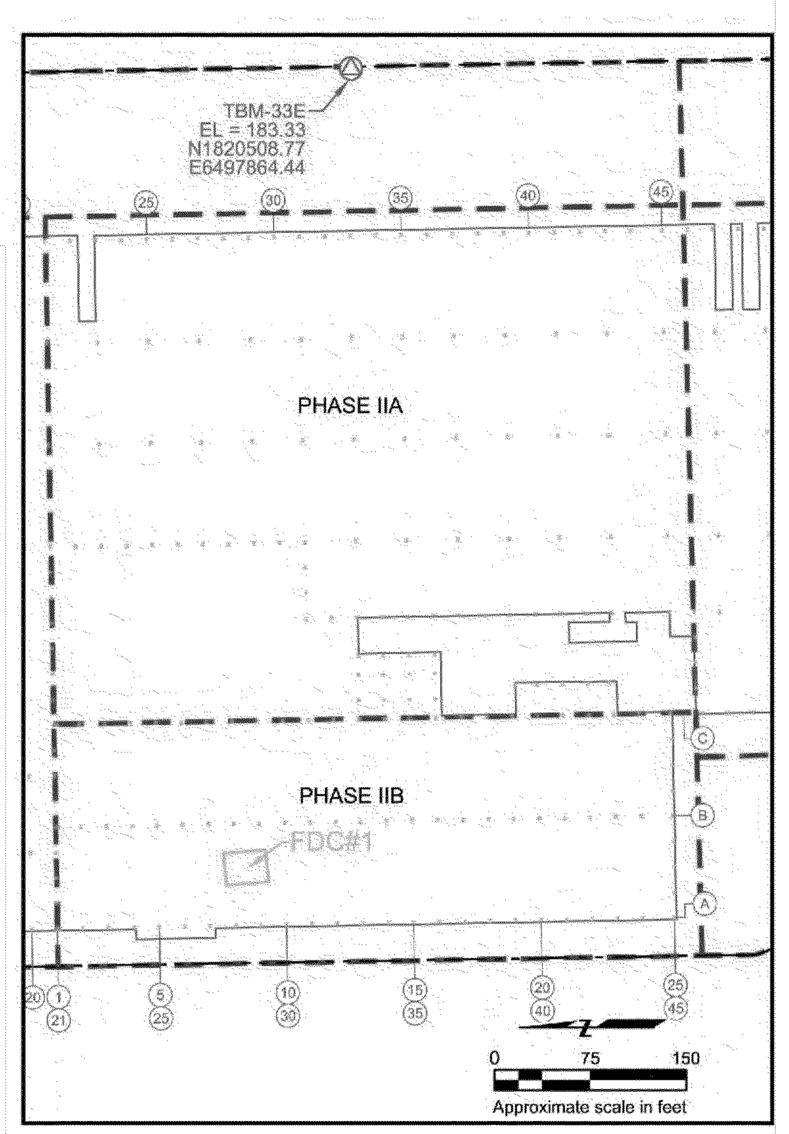
HORIZONTAL DATUM NAD83, ZONE 5

NGS PID STATIONS AJ1840 AND AJ1885 EPOCH DATE 2000.35



FDC#1- Survey Data
Pechiney - Phase IIB Area

Label	Easting	Northing	Elevation
4755	6497226.8712	1820605.7629	169.57
4756	6497251.7212	1820608.2909	169.47
4757	6497253.1888	1820592.2537	169.81
4758	6497254.5157	1820575.4967	169.51
4759	6497229.5432	1820573.0366	169.55
4760	6497228.3102	1820589.3896	169.88



BENCHMARK:

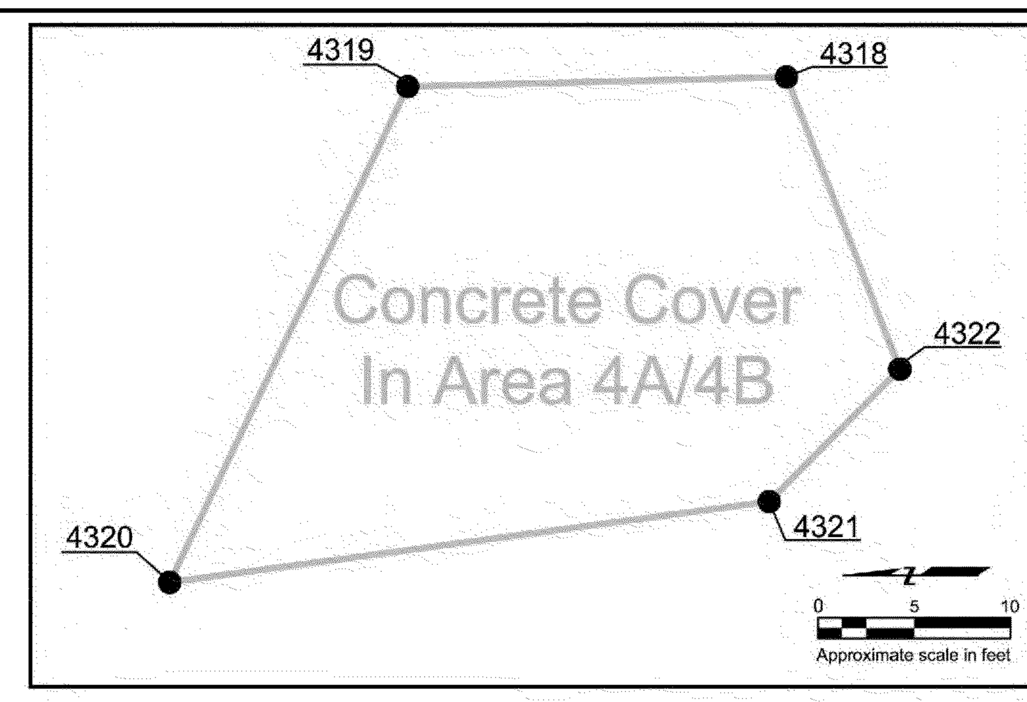
VERTICAL DATUM NAVD88

COUNTY OF LOS ANGELES BM #Y10598, 2" DISC IN WALK 4.6' N/O CF, 14.8' W/O BCR AT NE COR SLAUSON AVE AND BOYLE AVE (TO THE N) MKD (CITY OF VERNON MON)

2005 ELEV= 168.611 FEET NAVD88

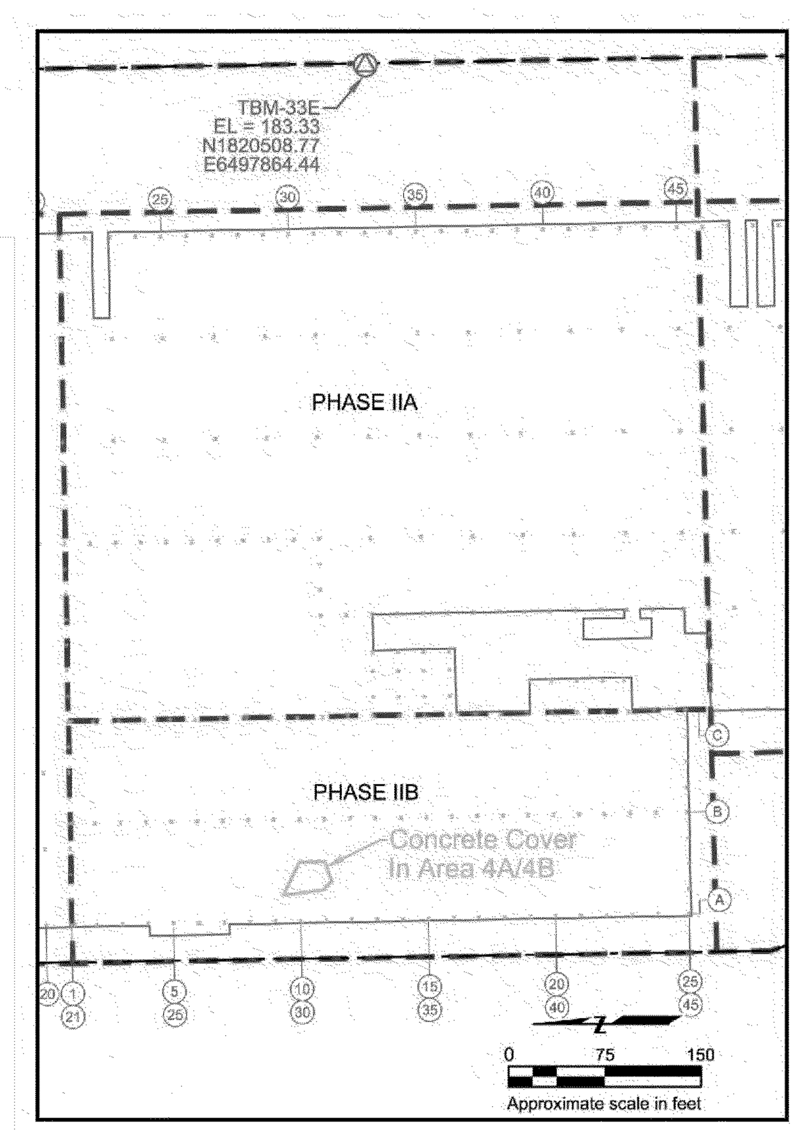
HORIZONTAL DATUM NAD83, ZONE 5

NGS PID STATIONS AJ1840 AND AJ1885 EPOCH DATE 2000.35



Concrete Cover In Area 4A/4B - Survey Data
Pechiney - Phase IIB Area

Label	Easting	Northing	Elevation
4318	6497242.4755	1820540.6545	166.92
4319	6497241.9569	1820560.3266	166.95
4320	6497216.2164	1820560.3267	167.02
4321	6497220.3916	1820541.4840	166.99
4322	6497227.3180	1820534.7201	166.97



BENCHMARK:

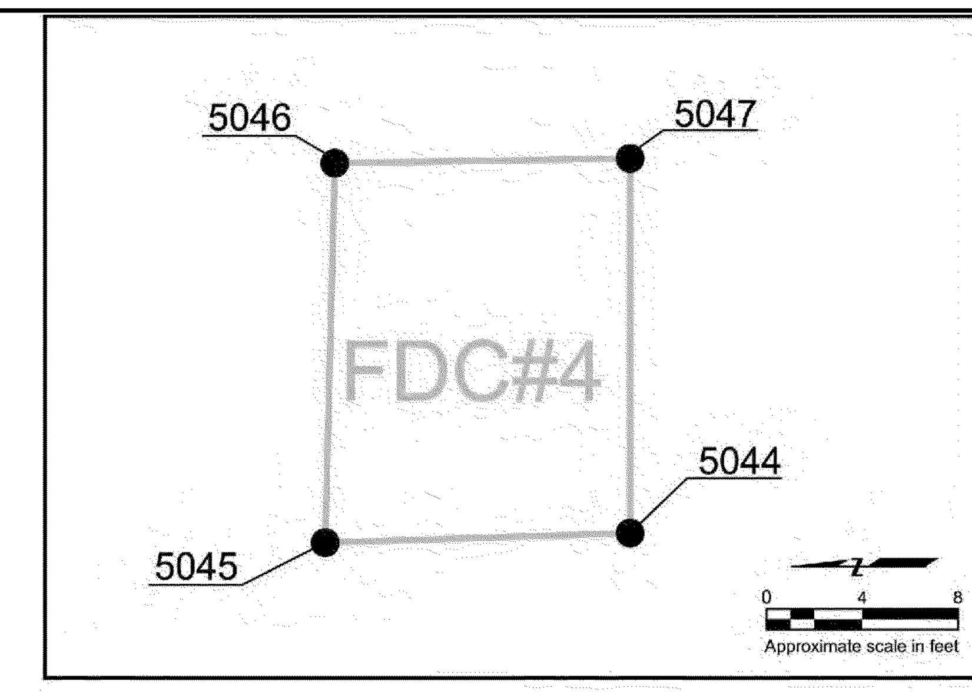
VERTICAL DATUM NAVD88

COUNTY OF LOS ANGELES BM #Y10598, 2" DISC IN WALK 4.6' N/O CF, 14.8' W/O BCR AT NE COR SLAUSON AVE AND BOYLE AVE (TO THE N) MKD (CITY OF VERNON MON)

2005 ELEV= 168.611 FEET NAVD88

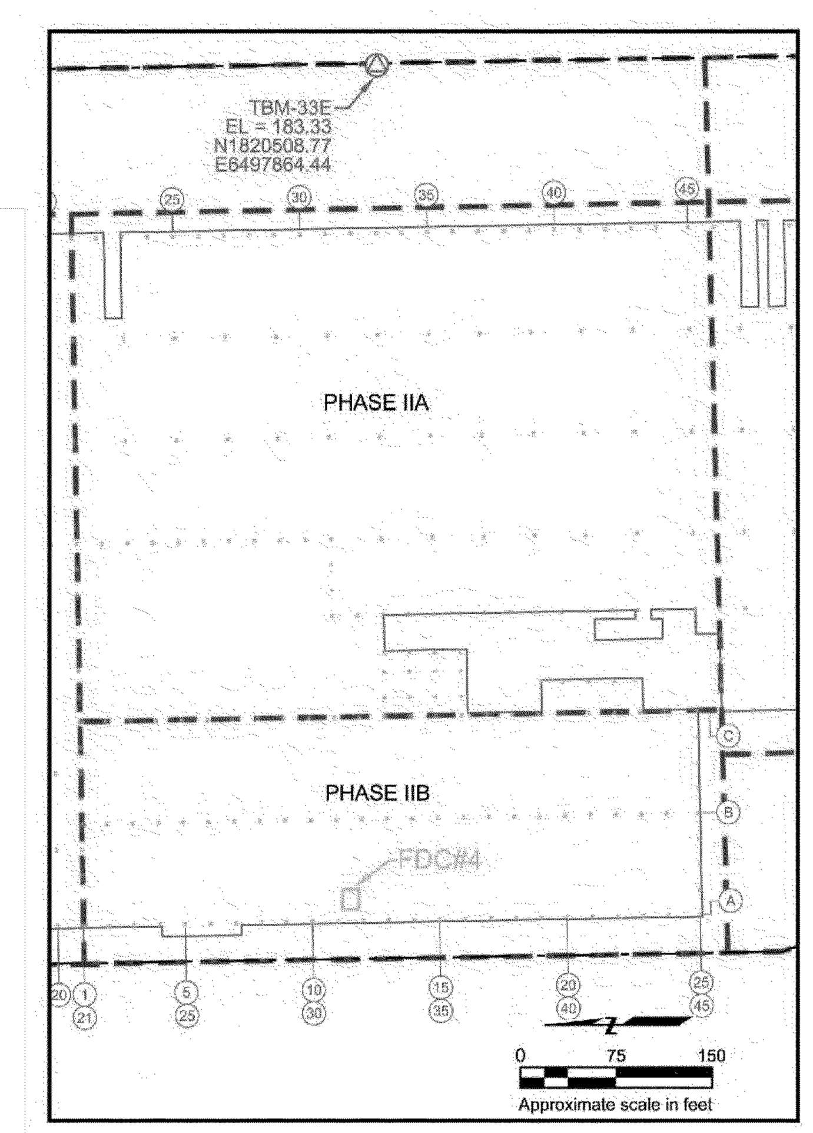
HORIZONTAL DATUM NAD83, ZONE 5

NGS PID STATIONS AJ1840 AND AJ1885 EPOCH DATE 2000.35



FDC#4 - Survey Data
Pechiney - Phase IIB Area

Label	Easting	Northing	Elevation
5044	6497205.9	1820522.8	171.13
5045	6497205.5	1820535.1	171.23
5046	6479221.3	1820535.1	171.20
5047	6497221.5	1820522.8	170.90



BENCHMARK:

VERTICAL DATUM NAVD88

COUNTY OF LOS ANGELES BM #Y10598, 2" DISC IN WALK 4.6' N/O CF, 14.8' W/O BCR AT NE COR SLAUSON AVE AND BOYLE AVE (TO THE N) MKD (CITY OF VERNON MON)

2005 ELEV= 168.611 FEET NAVD88

HORIZONTAL DATUM NAD83, ZONE 5

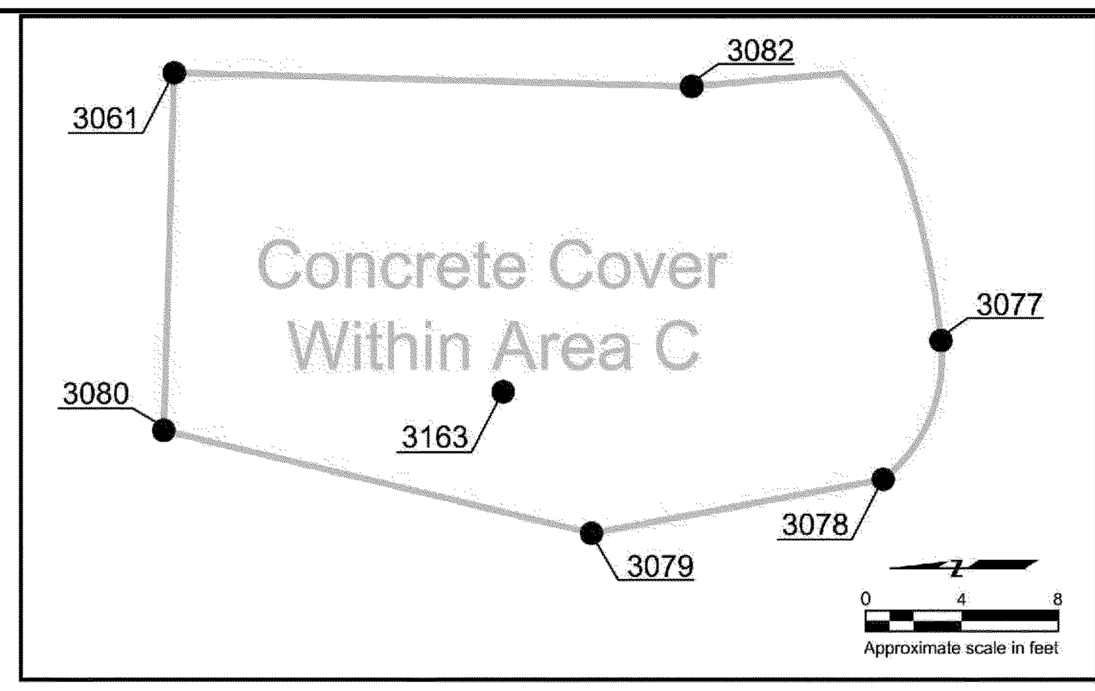
NGS PID STATIONS AJ1840 AND AJ1885 EPOCH DATE 2000.35

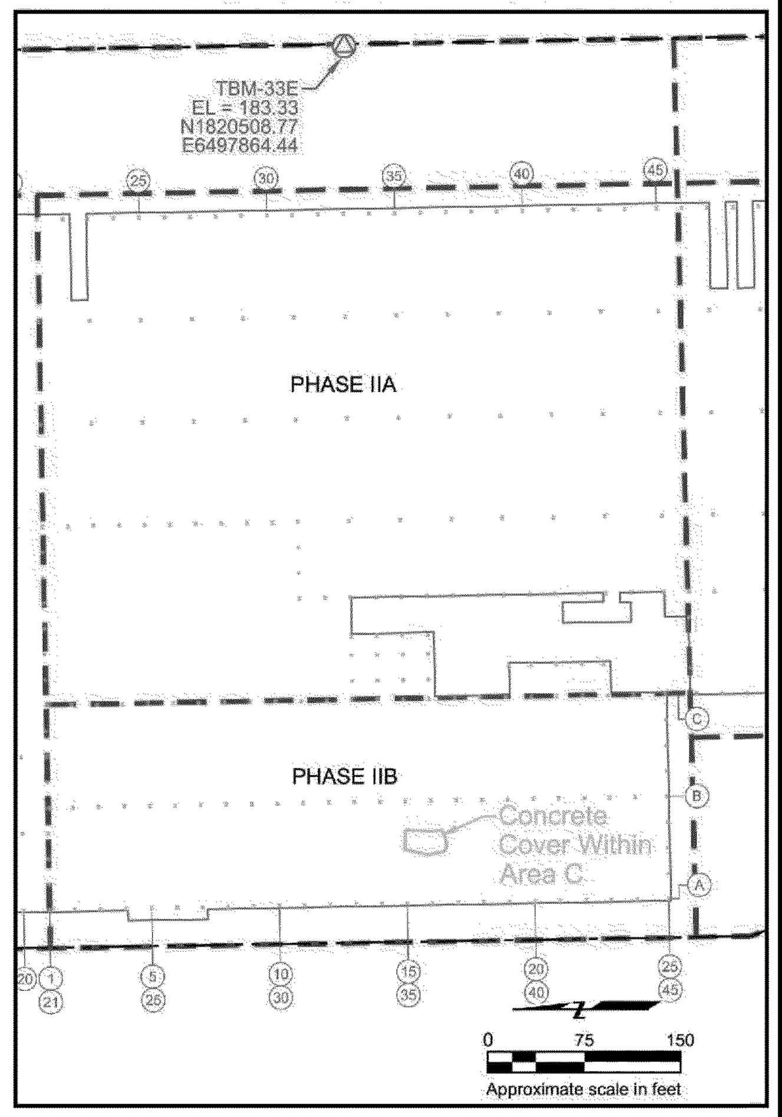
Explanation

- 5007 5004 5006 5005 — Below grade structure with survey points
- Below grade structure
- TBM-33E EL = 183.33 N1820508.77 E6497864.44 — Reference elevation benchmark
- Site boundary
- Phase boundary
- Chain link fence
- Railroad tracks (at grade)
- Building pad and footings
- (69) (G) Column and row numbering system for footings

DETAIL RECORD DRAWINGS
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

By: pah/jrw	Date: 03/30/15	Project No. 10627.003
amec		Sheet ☐ of 4





Concrete Cover Within Area C -
Survey Data
Pechiney - Phase IIB Area

Label	Easting	Northing	Elevation
3163	6497241.6930	1820447.3760	165.05
3061	6497254.9283	1820461.0296	--
3077	6497243.8194	1820429.1876	--
3078	6497238.0618	1820431.5899	--
3079	6497235.8172	1820443.6968	--
3080	6497240.0940	1820461.4626	--
3082	6497254.3742	1820439.5430	--

BENCHMARK:

VERTICAL DATUM NAVD88

COUNTY OF LOS ANGELES BM #Y10598, 2" DISC IN WALK 4.6' N/O CF, 14.8' W/O BCR AT NE COR SLAUSON AVE AND BOYLE AVE (TO THE N) MKD (CITY OF VERNON MON)

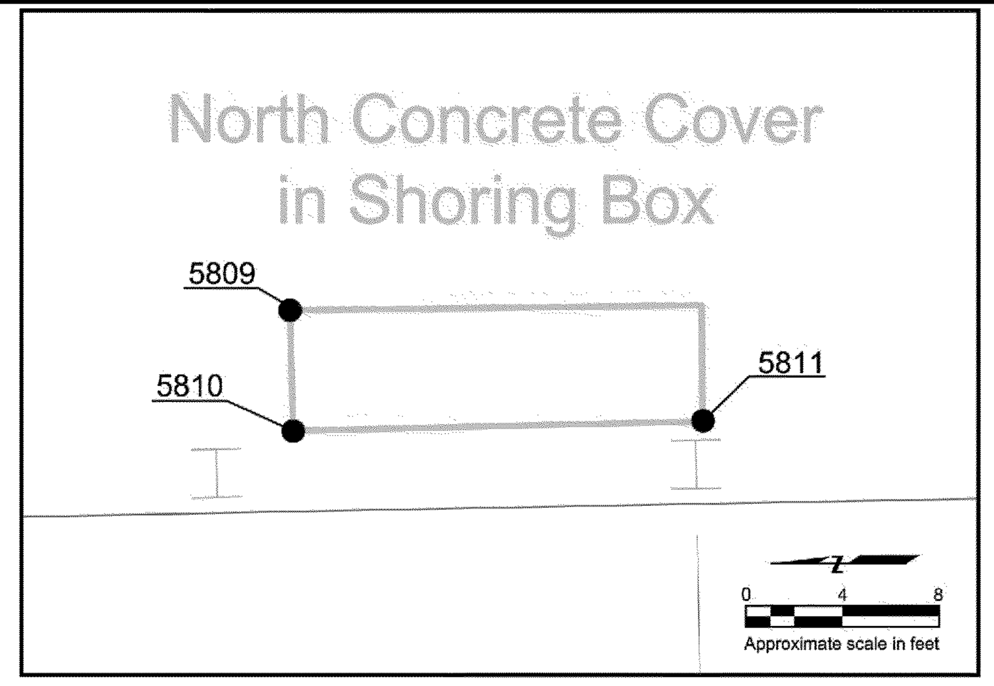
2005 ELEV= 168.611 FEET NAVD88

HORIZONTAL DATUM NAD83, ZONE 5

NGS PID STATIONS AJ1840 AND AJ1885 EPOCH DATE 2000.35

NOTE:

Area covered with concrete is based on survey data obtained after final soil removal. Due to safety concerns regarding excavation wall stability, survey of the limit of the concrete cover could not be conducted.



North Concrete Cover in Shoring Box -
Survey Data
Pechiney - Phase IIB Area

Label	Easting	Northing	Elevation
5809	6497202.4723	1820575.8653	165.79
5810	6497197.4738	1820575.7395	165.27
5811	6497197.9015	1820558.7449	165.80

BENCHMARK:

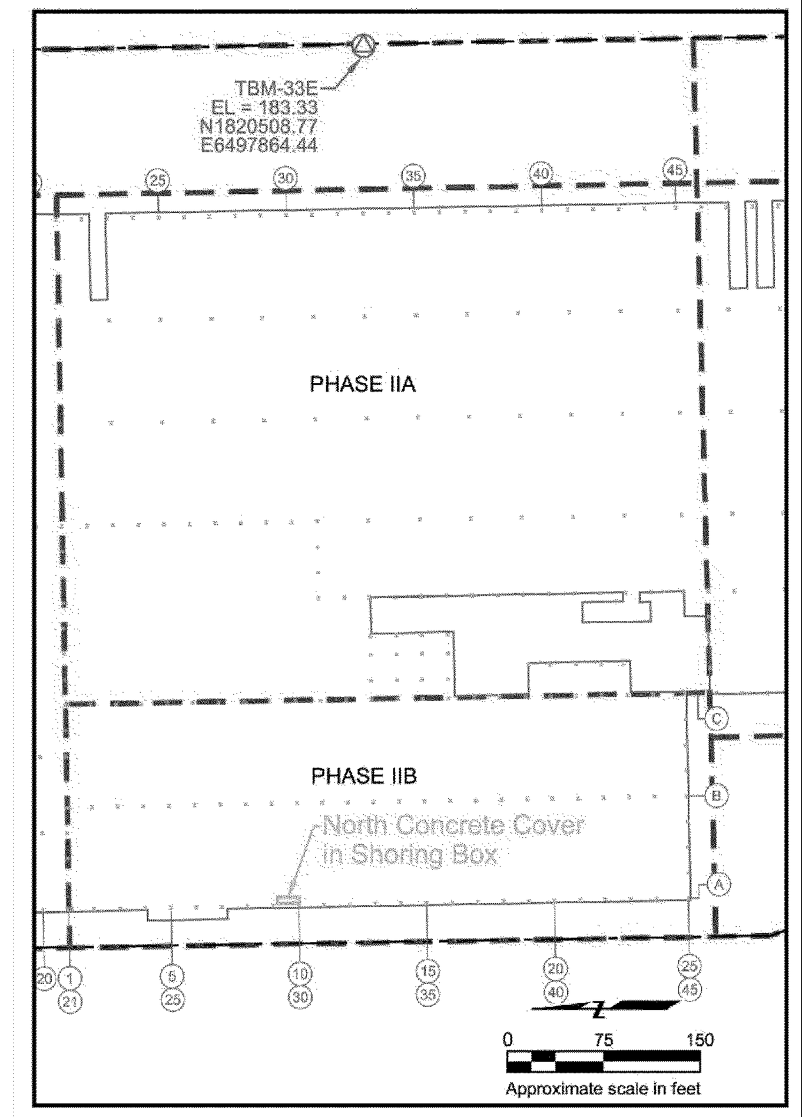
VERTICAL DATUM NAVD88

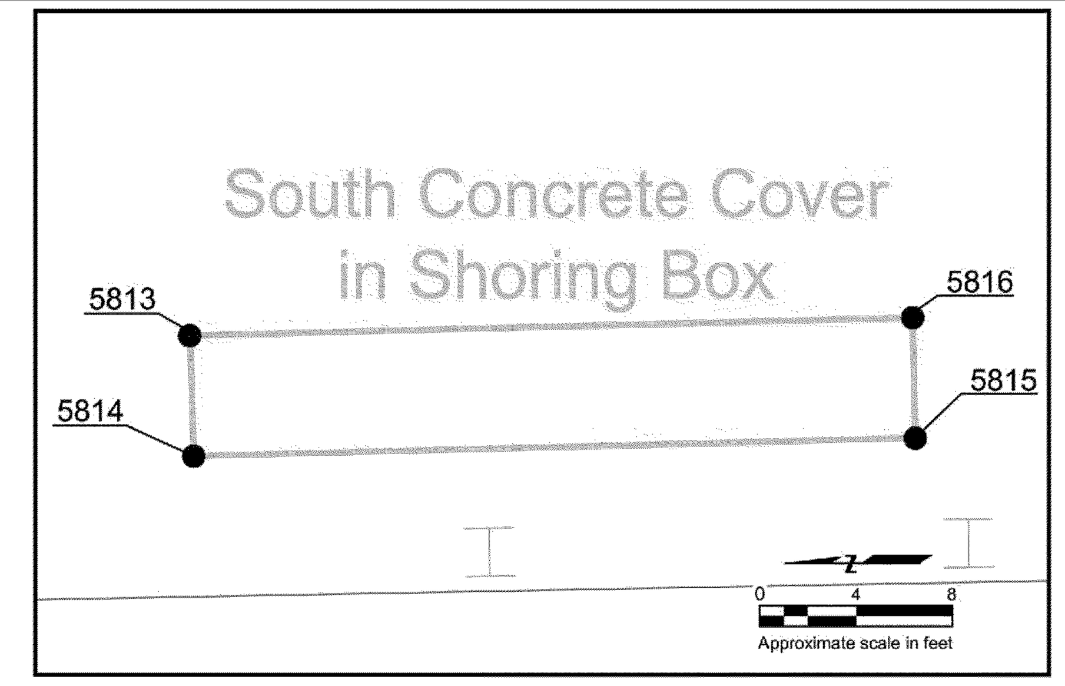
COUNTY OF LOS ANGELES BM #Y10598, 2" DISC IN WALK 4.6' N/O CF, 14.8' W/O BCR AT NE COR SLAUSON AVE AND BOYLE AVE (TO THE N) MKD (CITY OF VERNON MON)

2005 ELEV= 168.611 FEET NAVD88

HORIZONTAL DATUM NAD83, ZONE 5

NGS PID STATIONS AJ1840 AND AJ1885 EPOCH DATE 2000.35





South Concrete Cover in Shoring Box -
Survey Data
Pechiney - Phase IIB Area

Label	Easting	Northing	Elevation
5813	6497206.1595	1820511.8527	164.01
5814	6497201.1610	1820511.7269	163.98
5815	6497201.9157	1820481.7364	163.97
5816	6497206.9157	1820481.8622	164.04

BENCHMARK:

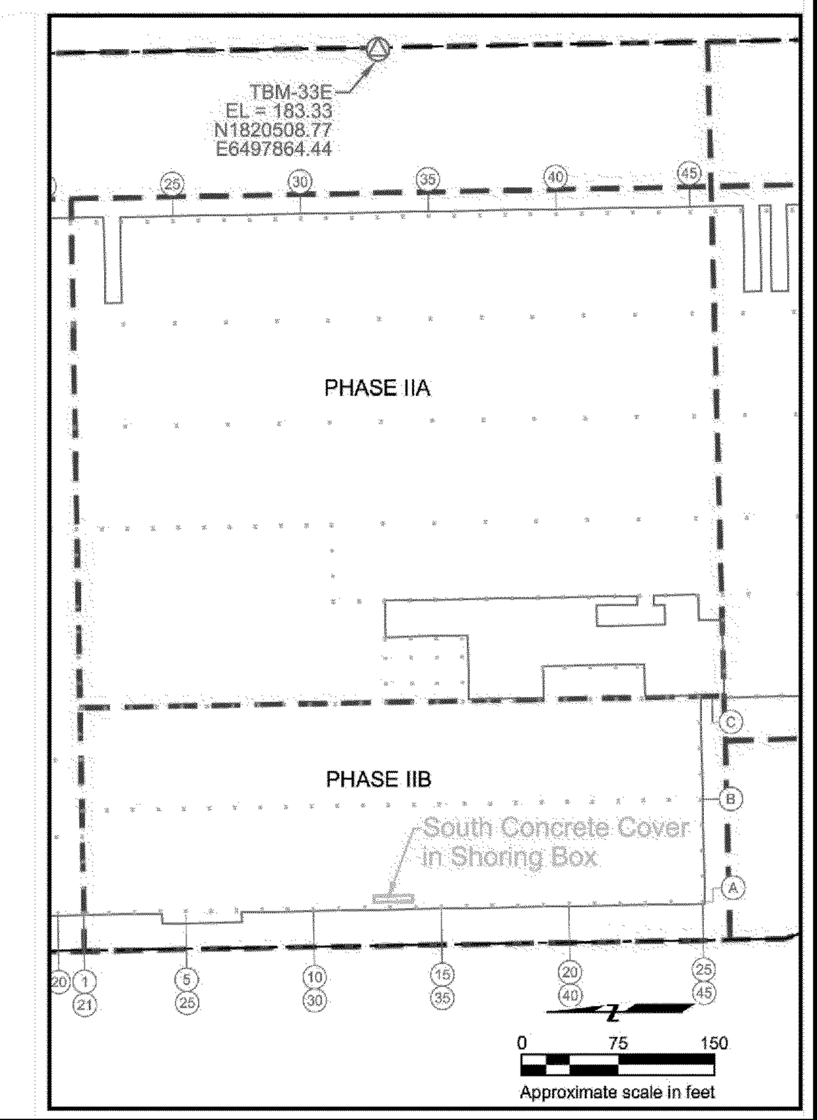
VERTICAL DATUM NAVD88

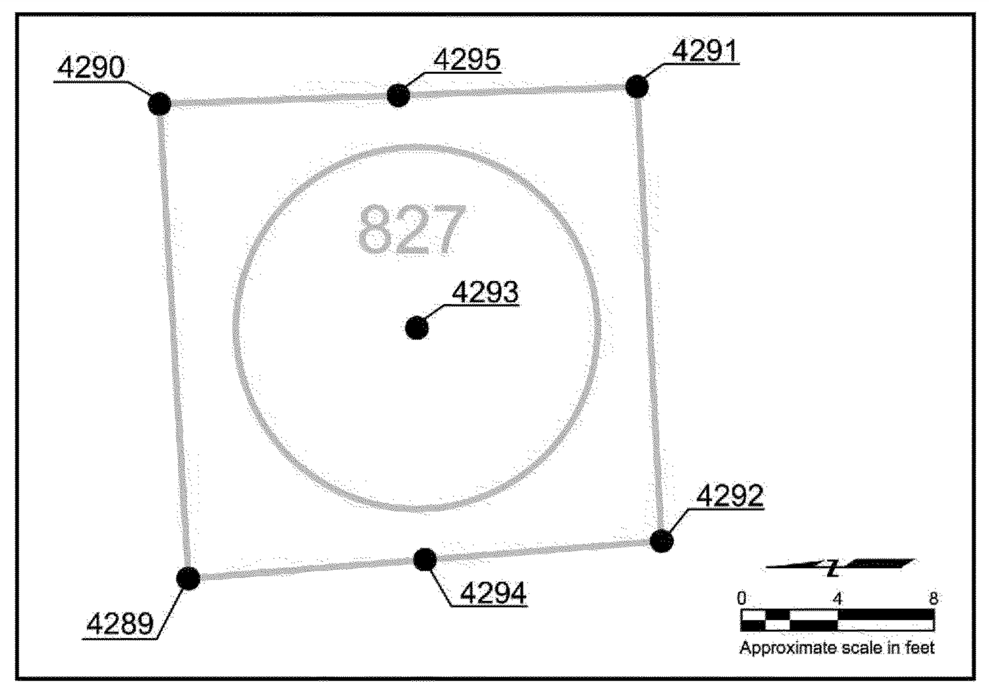
COUNTY OF LOS ANGELES BM #Y10598, 2" DISC IN WALK 4.6' N/O CF, 14.8' W/O BCR AT NE COR SLAUSON AVE AND BOYLE AVE (TO THE N) MKD (CITY OF VERNON MON)

2005 ELEV= 168.611 FEET NAVD88

HORIZONTAL DATUM NAD83, ZONE 5

NGS PID STATIONS AJ1840 AND AJ1885 EPOCH DATE 2000.35





Structure 827 - Survey Data
Pechiney - Phase VI Area

Label	Easting	Northing	Elevation
4289	6497463.9265	1820104.3929	169.34
4290	6497483.5835	1820105.5848	169.51
4291	6497484.3047	1820085.7779	169.40
4292	6497465.4764	1820084.7589	169.48
4293	6497474.3046	1820094.9127	168.40
4294	6497464.7014	1820094.5759	169.53
4295	6497483.9441	1820095.6813	169.62

BENCHMARK:

VERTICAL DATUM NAVD88

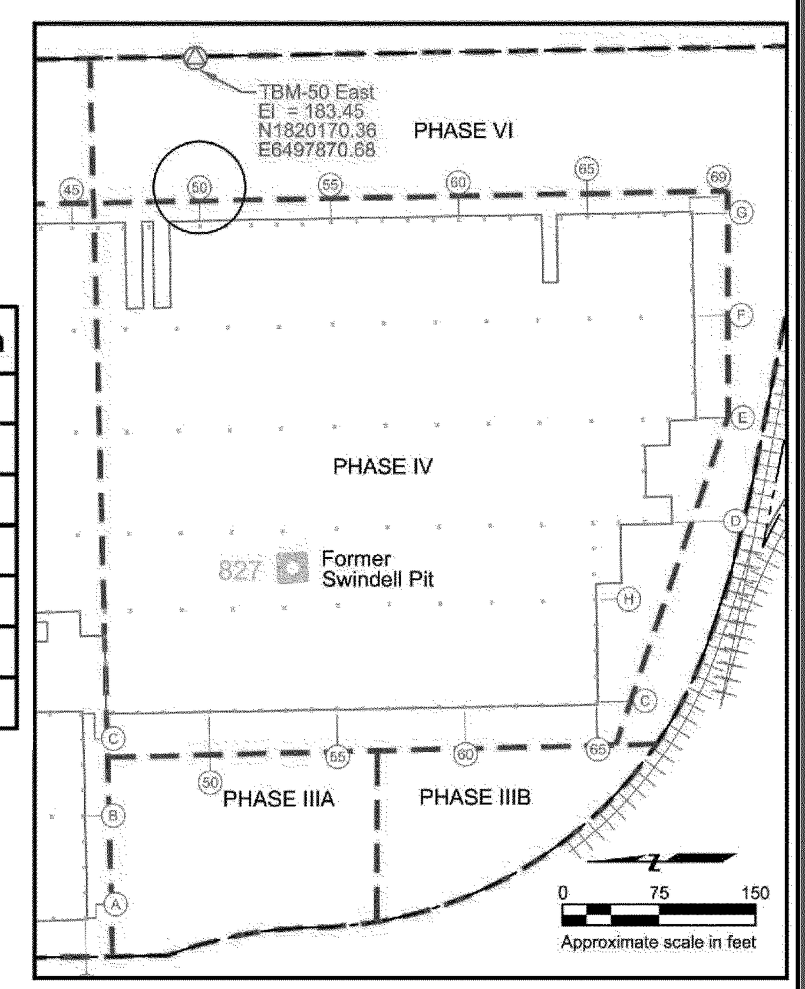
COUNTY OF LOS ANGELES BM #Y10598, 2" DISC IN WALK 4.6' N/O CF, 14.8' W/O BCR AT NE COR SLAUSON AVE AND BOYLE AVE (TO THE N) MKD (CITY OF VERNON MON)

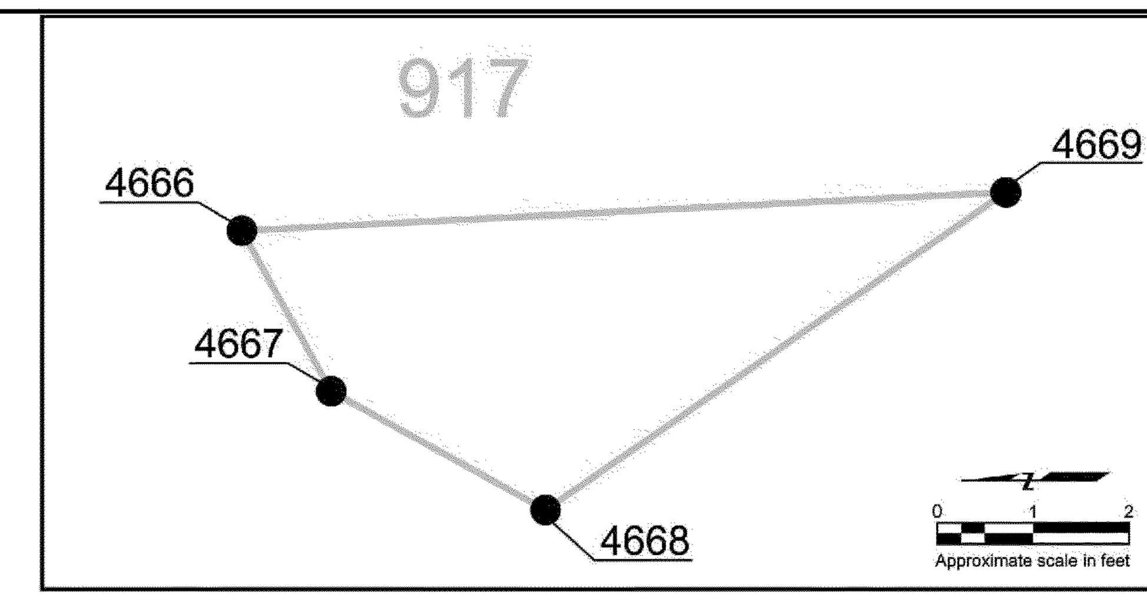
2005 ELEV= 168.611 FEET NAVD88

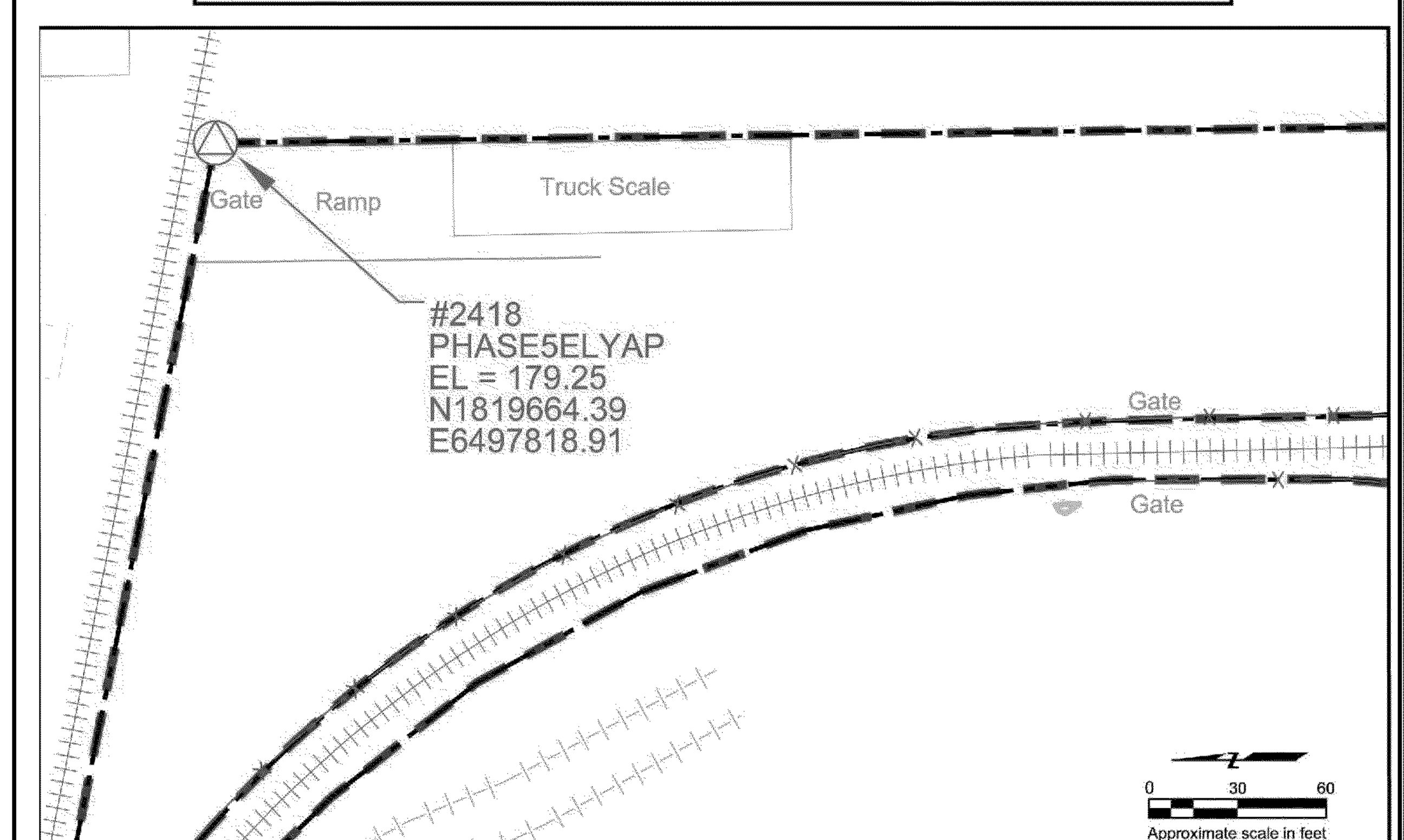
HORIZONTAL DATUM NAD83, ZONE 5

NGS PID STATIONS AJ1840 AND AJ1885 EPOCH DATE 2000.35

Note: Compared to elevation to street FS elev. at TBM-50 East: Elev = 183.45'







BENCHMARK:

VERTICAL DATUM NAVD88

COUNTY OF LOS ANGELES BM #Y10598, 2" DISC IN WALK 4.6' N/O CF, 14.8' W/O BCR AT NE COR SLAUSON AVE AND BOYLE AVE (TO THE N) MKD (CITY OF VERNON MON)

2005 ELEV= 168.611 FEET NAVD88

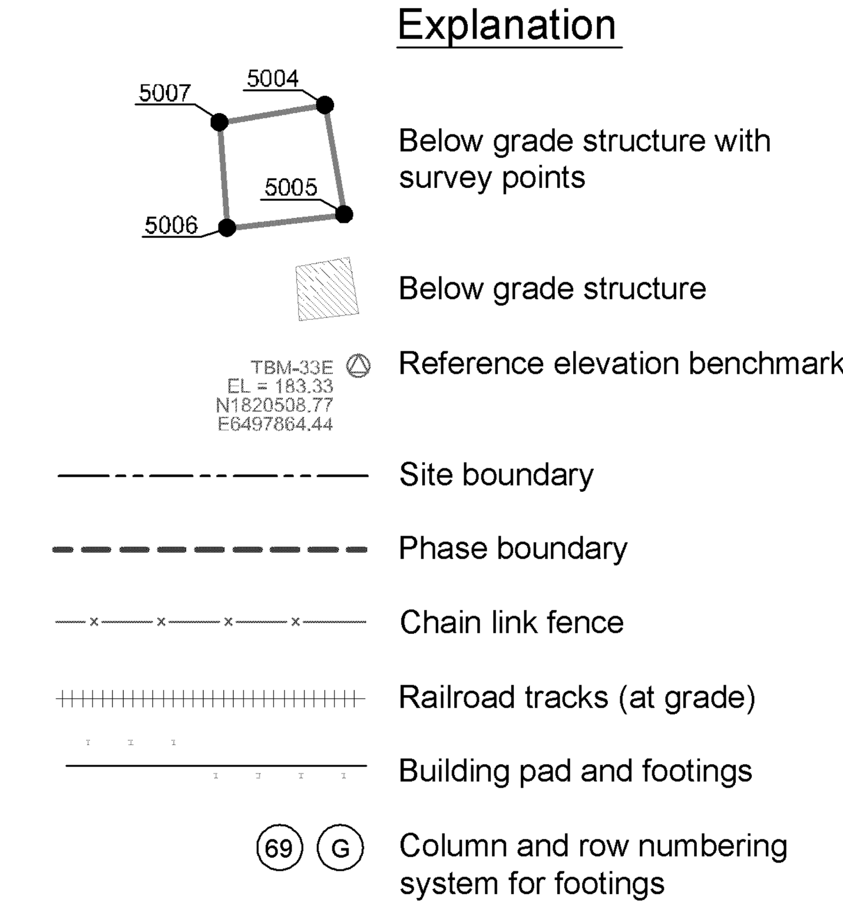
HORIZONTAL DATUM NAD83, ZONE 5

NGS PID STATIONS AJ1840 AND AJ1885 EPOCH DATE 2000.35

Structure 917 - Survey Data
Pechiney - Phase V Area

Label	Easting	Northing	Elevation
4666	6497696.2714	1819379.9656	169.11
4667	6497694.6032	1819379.0364	169.04
4668	6497693.3732	1819376.8112	169.00
4669	6497696.6676	1819372.0345	169.12

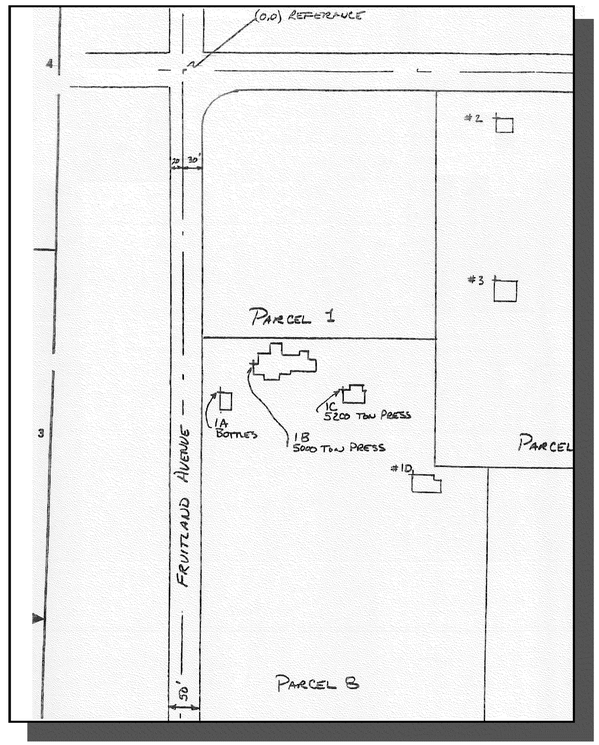
Explanation

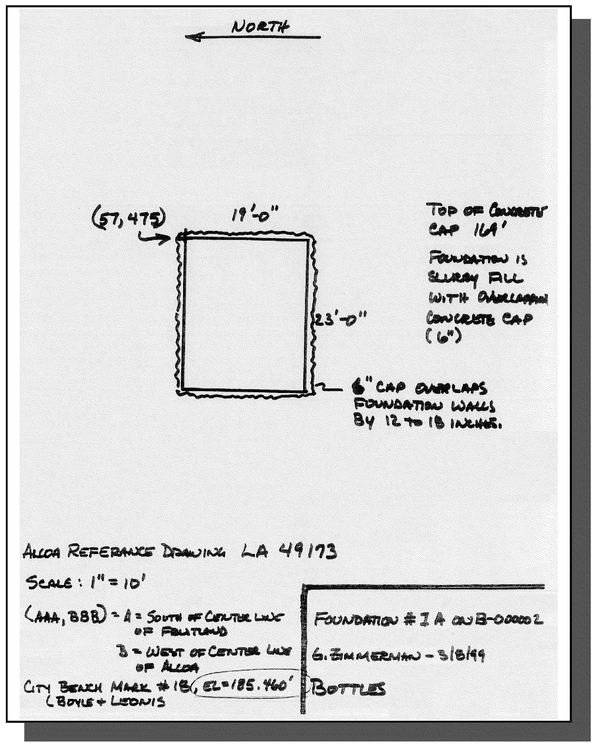


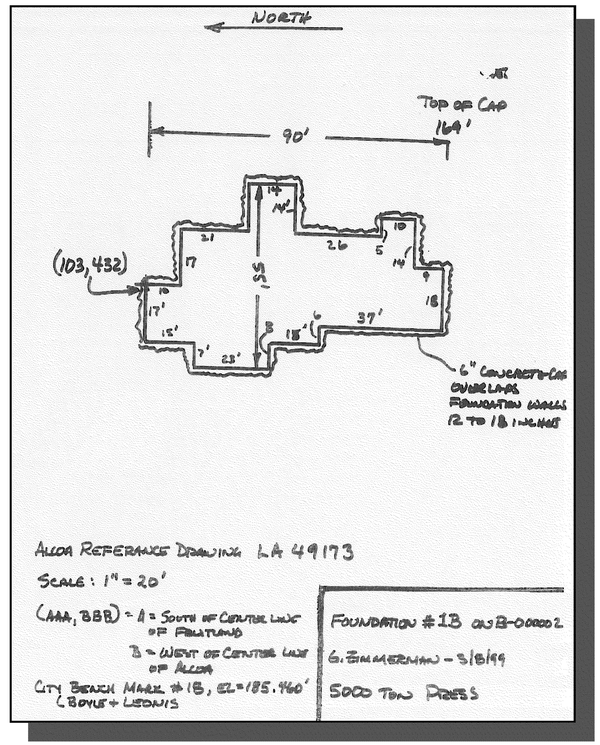
DETAIL RECORD DRAWINGS
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

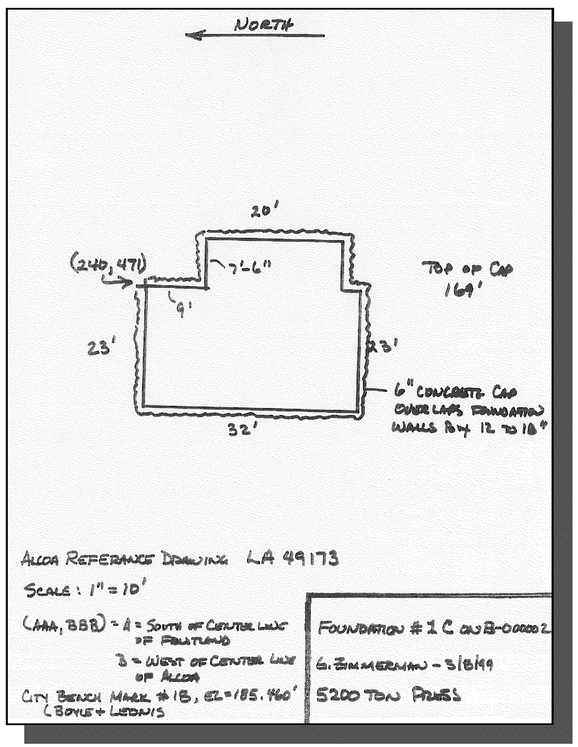
By: pah/jrw	Date: 12/18/14	Project No. 10627.003
amec		Sheet 3 of 4

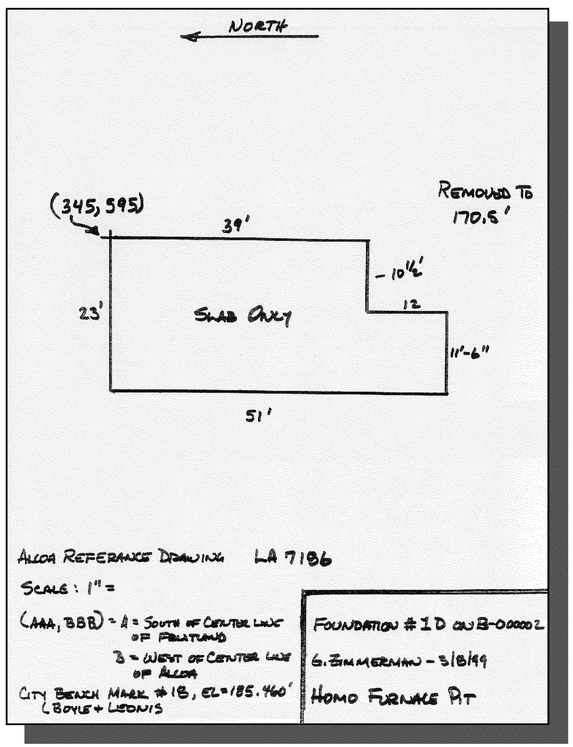
Plot Date: 12/18/2014 1:31:36 PM Plotted by: pat herring
Drawing Path: Y:\10627.003 0\ACAD\REPORTS-2014\ALL_SITE_RECORD_DRAWINGS\TB_RECORD_SITE.DWG , Sht3 - Detail Record Dwgs











Note:

Record drawings are based on prior as built records and were not verified as part of this work.

DRAWINGS NOT TO SCALE

DETAIL RECORD DRAWINGS
MARCH 8, 1999
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

By: pah/jrw	Date: 12/09/14	Project No. 10627.003
amec		Sheet 4 of 4

Plot Date: - 12/16/2014 6:13:05 PM - Plotted by: pat herring
Drawing Path: - V:\10627.003\DGN\CONSTR\2014\LD_SITE_RECORD_DRAWINGS\TB_RECORD_SITE.DWG Sht4 - Detail Record Dwgs 1999